THE DENTAL DIGEST





GEORGE WOOD CLAPP, D.D.S.

PUBLISHED BY

THE DENTISTS' SUPPLY CO.
CANDLER BLDG..TIMES SQUARE
220 WEST 42*9 ST., NEW YORK



WILLIAMS READY MADE LINGUAL BARS

No. 1 Gauge

8 x 12 heavy
18 K Solid
Gold - Platinum . . . \$4.00

Gold Cased
§ Stock . . \$1.50

No. 2 Gauge

9x14 medium
16 K Solid
Gold - Platinum . . \$3.50

Gold Cased
§ Stock . \$1.50

No. 3 Gauge

10 x 13 light
16 K Solid
Gold - Plarinum · · · \$2.50

Gold Cased
§ Stock · . \$1.50

An examination of Williams Ready-Made Lingual Bars will convince you that:

They are heavier because they contain more gold. Weigh them!—

Have greater strength and rigidity—

Are adapted to your case with but very little manipulation—

Are properly corrugated, so the bar is not weakened where it should have its greatest strength—

Are long enough for the largest case.

Use Williams 18 K. solder to insure a strong joint when attaching your clasps.

Ask your dealer to send you a Williams Bar on approval

THE WILLIAMS GOLD REFINING CO.

2978 Main St. Buffalo, N. Y.

Bridgeburg, Canada



THE DENTAL DIGEST

Vol. XXV

AUGUST, 1919

No. 8

THE JOURNAL OF DENTAL RESEARCH

AND THE

PRESENT DAY JOURNALS

BY GEORGE WOOD CLAPP, D.D.S., NEW YORK, N. Y.

Just as this issue is being prepared for the press, there comes to hand the first copy of the *Journal of Dental Research*, "a journal conceived in scientific altruism, born of the spirit of dental progress, matured on the ideals of public service, and dedicated unreservedly and without qualification to truth and advancement in dentistry." In more specific terms, it might be described as a magazine which is to be financed and controlled entirely by dentists, which will present the results of important researches, and which will carry no advertising matter. The success of such a magazine will mark a forward step in dental journalism. The Dental Digest welcomes it and wishes it a long, useful and successful career. Almost exactly 80 years ago the first dental journal was founded on a similar plan and rendered creditable service for 20 years.

The description of the magazine quoted above is from an opening note by Dr. Gies. Dr. Gies writes so well that it is a pleasure to read even when one feels that the spirit of the apostle has led him to overlook the good in some of the things he spurns, and in things which will be important factors in making possible the success of the present achievement. Perhaps all of Dr. Gies' criticism of the present dental journalism may be summarized in his words, "a system of journalism that has been completely eliminated from respect and influence in every other profession, because of that system's inherent insincerity, unreliability and self-ishness." At least such an indictment is sufficiently sweeping and severe to include all else that he might have written.

Truth, like diamonds, presents many facets, and no man can catch the reflections from all at once. It is possible for men who are agreed on a principle and are of equal ability, integrity and nobility of purpose, to differ in interpretation of facts, and as to the method most desirable to achieve an end. Let us agree on the desirability of a dental magazine edited in the spirit of Dr. Gies' words. Let us take issue with the state-

ment that dental journalism, as exemplified by those dental magazines in which the business department, circulation, printing, etc., is in the hands of dental manufacturers, is insincere, unreliable and selfish. Let us oppose to this the statements that the dental profession has never yet cared enough for a dental magazine under exclusively professional control to give it sufficient financial support to defray the mere expense of publication, to say nothing of payment for the work involved, unless the subscription price was made part of a Society's dues; that the present form of journalism did not come into existence until two magazines under exclusive professional control had failed; that at least in the better magazines of to-day the text pages have been, on the average, free from domination by the publishers; that the editors have been, on the average, honorable and reliable men, as unselfish as their fellows; and that they have striven to edit their pages in the spirit which Dr. Gies claims for the new journal. Many of them have worked under handicaps of ignorance and indifference on the part of the profession which the new journal will never know, and those who are gone, if they could look back, might regard the new journal as the structure for which they, laboring under great difficulties, laid the foundation stones. It must be a man newly come into the profession who will say that such men as Litch, McQuillen, Taft, Johnson, Harlan, Prinz, Hoff, Buckley and Hunt would deliberately lend their efforts to perpetuate a system which is inherently insincere, selfish and unreliable. He is brave who would say that such men as Atkinson, Garretson, Kingsley, Flagg, Riggs, Darby, Black, Miller, Turner, Williams, Gysi and a hundred others, would foster such a system by willing contributions over a long period of years. Were they of the calibre that condones insincerity merely for the sake of getting into print? Is there any evidence that insincerity and unreliability ever occurred to them?

Does not Dr. Gies take the position of one who kicks at the ladder which has made his ascent possible? Let us see whether the system of journalism he condemns has not made possible the ambitious effort of to-day. If we study Dr. Trueman's "Dental Journals of the United States," we find that in 1839 an association of dentists was formed in New York to publish The American Journal of Dental Science. No thought of any other than exclusively professional control occurred to the founders, because no other form of control had ever existed. There was to be one copy per year at a price of \$3. Two years later it was made a quarterly, and the price raised to \$5. For ten years it was financially unsuccessful and the professional spirit of the Society evidently not being able to pay the mere cost of producing its own literature, it passed into the hands of a man whose spirit was greater than the Society's, Dr. Chapin A. Harris, who bore the expense and labor until his death,

ten years later. It might be expected of such a spirit that the volumes produced under his charge would justify Dr. Trueman's words, "they reached a high mark in dental journalism. There was about them a stateliness, a dignity, a professional tone and scholarship which has not been excelled." Dr. Trueman says of the work, "that it loses nothing by comparison with other scientific journals of the day. It was plainly to be seen that it was accomplishing the object for which it was designed. It brought the members of the profession nearer together, and taught them that it paid to make the results of observations and experiences common property." After twenty years of struggle and financial loss by the few who did care for the sake of the many who didn't care, the journal ceased to exist.

In 1847 the Mississippi Valley Dental Association, feeling the need of a journal as a means of professional communication, projected a journal, the first copy of which appeared in the same year. The income for the first year was insufficient to pay the expenses, so the Society met the deficit. At the end of the second year, the deficit was larger and the Society gave up the enterprise. As in the case of the New York journal, a rare spirit came to the rescue. Dr. James Taylor assumed the labors and burden and carried it at a loss for seven years. Drs. Taft and Watt then carried it for three years, when it was sold to the owner of a dental depot in Cincinnati. It is now published by the Samuel A. Crocker Co., is in its 73rd year, and is the oldest dental journal in the world. Perhaps Dr. Hoff might resent the suggestion that the conduct of this journal under Drs. Taft, Watt and himself, has been "insincere, selfish and unreliable."

This brief summary shows that before the present system of dental journalism was thought of two groups of the most progressive dentists of their time established dental journals, exclusively under professional control, and that after short experiences they preferred to go without journals rather than defray the mere cost of publishing their own literature. It shows that the preservation of dental journalism for such time as the profession preserved it, unaided, depended on heavy sacrifices by individuals in the profession who supported the journals from their own earnings, and that with the passing of their lives or their supporting ability, this form of dental journalism also passed. Drs. Harris, Brown, Westcott, Dunning, Dwinelle, Piggott, Taylor, Taft, and Watt, stood in their day quite as high professionally as the brilliant group which is to edit the Journal of Dental Research. They gave unsparingly of themselves and their means. Their magazines "could be seen to be accomplishing the purposes intended," and they "reached a mark of dental excellence which has not been excelled." Their efforts were futile because the profession did not care enough about its own literature as presented

by its best representatives to pay the mere financial cost of producing it. What greater chance of success could the *Journal of Dental Research* have had in those days? What prospect would there have been of securing the endowment it now seeks?

Eight years after the establishment of The American Journal of Dental Science by the dentists of New York, and only two years before the abandonment by the American Association of Dental Surgeons of the effort to maintain a journal of which the business problems of publishing were under professional control, the first of the important journals published by a dental manufacturer had its small beginnings in The Dental News Letter, published in Philadelphia by Jones and White. Commencing as a commercial publication, it enlisted professional editorial ability and passed into the Dental Cosmos, under which title it has for many years held an honored place in the profession, and has been the means of presenting to the profession the researches of many of the men whom the profession most honors. Many of the editors of the new journal have won general professional recognition through their contributions to it. The publication of dental journals by a commercial house in the West did not commence until 1858, after 11 years of unsuccessful effort at professional control of publication activities.

With the advent of publication by dental manufacturers the business management was established in the hands of business men. The editorial duties were usually discharged by reputable dentists, who for the first time in the history of dental journalism received some remuneration and found themselves supplied with funds for purchasing articles and for illustrations which were often numerous and expensive. A part of the cost of publication was charged against the advertisements, and the journals were sold at moderate annual prices. The introduction of the journals to the dentists was energetically undertaken, and many a dentist who did not wish to subscribe or to read, was cajoled out of his isolation by the representatives of the publisher. The success of the efforts may be seen in the fact that the four leading magazines of which the business of publishing is in the hands of dental manufacturers reach more than 60,000 paid subscribers.

Dr. Gies states that the present system of journalism has demoralized the spirit and impoverished the imagination of dentistry, meaning probably thereby the individual dentists. Dr. Gies has gathered his impressions of dentistry's usefulness, importance and dignity from association with dentists. These dentists must have grown up under this system of journalism, because for half a century there has been little other journalism. Yet their spirit and imagination were not impoverished or their ideals would not impress Dr. Gies.

If this association could have taken Dr. Gies back 25 or 30 years, and out among the average dentists, he would be able to appreciate that never before within the memory of living man has dentistry been so rich in the spirit or the imagination, so keen for better science and technic, so ready to spend its substance to get both, as it is to-day, 70 years after the death of the last journal of which the business part was under professional control, except in cases where the subscription price is incorporated in Society dues. If Dr. Gies thinks the profession to have once been richer in spirit than it is to-day, he has been misled, that is if the unquestioned history of dental journalism can be relied upon. And one of the best evidences of its present richness is the very satisfactory beginning of the endowment fund which he indites on page 34.

It is a fair inference that the way for the success of the Journal of Dental Research has been paved, in no small degree, by the professional spirit and imagination developed by the present system of journalism. The old habits of secretiveness and isolation have been broken down. Dentists have been brought nearer together. Their discoveries have been shared, to the benefit of all. And paraphrasing the words of Dr. Gies, he who has found the truth has not only been free to tell it, but has often been paid enough to make it possible for him to tell it and has been provided with a vehicle of communication that reaches around the world. New vistas of achievement have been opened; noble ideals of service spread abroad.

Our profession is not a book-reading profession. The existing journals have taught many dentists the only habits of study that have persisted after college days; they have been the only societies that thousands have ever joined; and they have offered the nearest equivalents to post-graduate courses that more thousands have ever taken. The greatest difficulty the *Journal of Research* will encounter in reaching the zenith of its power, will arise from the fact that the journals have not been able to do more in the way of preparation for it. Our development is incomplete, but it is upward; it is not downward from a former greatness. If these journals had not done what they have, there is no assurance that any other agency would have arisen to pave the way.

And now for Dr. Gies' charge of inherent selfishness. The Standard Dictionary defines selfishness as "caring only or chiefly for one's own interests to the disregard of the rights, comforts or wishes of others." The average conduct of the better dental journals does not justify such a charge. Probably no editor of consequence has served primarily for financial reward; editorial salaries have never been equal to what a man of the calibre of many of the editors could easily earn in his practice, by less work than his editorial duties entailed. They served, as Dr. Gies

serves, to give form to expression which they believed to be valuable to others. No dental magazine is published primarily as a profit-sharing enterprise; experience has long since taught publishers better than that. Publishers have, in general, paid well for their publicity in their own magazines. The benefits have come from the fact that the magazine provided a vehicle which was welcome to readers because of its constructive value in developing professional life. Such coöperation is nearer to altruism than to selfishness.

If the editors have failed to live upon that level which Dr. Gies desires to establish, it has not been because the publishers have held them back. My own experience in connection with dental magazines covers a number of years and involves acquaintance with several editors. None of them has ever received any direction from publishers as to the contents of the text pages. Just imagine a publisher telling Dr. C. N. Johnson what to print in the *Dental Review*. During the ten years that the DIGEST has been under its present management the publishers have in general known the contents of the text pages only when the bound volume was laid on their desks as the magazine went in the mails.

The fact is that there are two quite distinct parts to the production of a dental journal, a professional side and a business part. The professional side includes the selection and preparation of the matter for the text pages and should be left to professional men; the business part includes subscription getting, advertisements, printing, binding, mailing, collections and the like, and may well be left to business men. Dr. Trueman, after a study of the history of all the American dental journals, wrote that in the absence of complete organization of the dental profession, "the publication of a dental journal calls for a business energy, tact and persistence that is not as yet and possibly never will be, available outside of business ownership."

The Journal of Dental Research is the fourth effort on the part of the profession to successfully conduct the business part of magazine publication, the printing, binding, mailing, subscription getting, collections, etc. Two of these failed and the third is continued in the new journal. It commences life under conditions more favorable than those attending the birth of either of the first two efforts. When they were made, no magazine with a subscription price of three dollars per year was able to sell enough copies to defray the cost. There would have been no hope of an endowment by the enlightened for the benefit of the unenlightened which would have made it possible to support the magazine. No such galaxy of talent could have been arrayed as editors. No such interested, enlightened and prosperous audience awaited it.

Success for a magazine is not achieved merely by launching it. It

must demonstrate its own worth and make its own place. When this has been done, the paths of achievement lie open before it. Enough needs await filling to offer the new journal unlimited opportunities to exercise all its strength and power.

May the Journal of Dental Research live long and prosper. And when success has definitely crowned its efforts, may Dr. Gies find it in his heart to write, "it is done and is well, but it was made possible, at least in part, by the preparatory work of many who worked honestly and unselfishly through the magazines they edited."

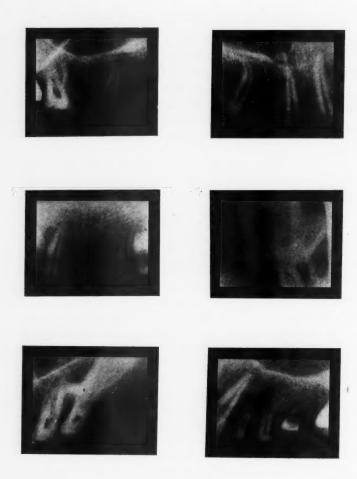


A CONDITION OF TEMPORARY TEETH WITHOUT SUCCESSORS

By M. HILLEL FELDMAN, D.D.S., NEW YORK CITY

(Chief of Dental Department, Lincoln Hospital)

The writer wishes to present herewith a series of dental film radiographs which show a peculiar condition rarely seen in healthy, normal people.





The patient, a young man, presented himself recently for examination, being referred by his dentist to have all areas showing temporary teeth radiographed in order to determine the presence of the permanent successors beneath the temporary teeth.

In the maxilla, the permanent teeth which never developed, are the laterals, right and left, the four bicuspids, and the six year molars.

In the mandible, the permanent teeth which never developed, are the centrals and the laterals, the four bicuspids, and the six year molars.

The young man, twenty years of age, gives no history of infantile illness or family disease so far as he remembers.

616 MADISON AVENUE, NEW YORK CITY.



DO PORCELAIN CROWNS MEET THE REQUIREMENTS OF PRACTICE?

By George Wood Clapp, D.D.S., New York

FOURTH PAPER

ROOT DIAMETERS AND CROWN NECKS

There is apparently no law of proportion between the mesio-distal diameters and the linguo-labial diameters of the roots of the upper incisors and cuspids at the junction of the enamel and cementum. This fact is of the utmost importance to every dentist who seeks to fit the necks of porcelain crowns to the roots of natural teeth, and to every manufacturer who desires to offer crowns with necks that can be fitted to roots with a reasonable amount of effort.

DISSATISFACTION WITH CONVENTIONAL CROWNS

Much dissatisfaction with these crowns has arisen because of the conventional forms, the lack of graded sizes and the impossibility of really scientific selection. But all these might be forgiven, at least in part, if the necks of crowns could be readily fitted to roots for which they were intended. But the necks of the conventional crowns are not well suited to fit the roots of the natural teeth. It is the purpose of this article to show why they are not, and what changes in neck diameters are necessary to enable dentists to fit crowns to roots.

ROOT PROPORTIONS AND SIZES

In a previous article attention was called to the difference between proportion and size. Because that difference is especially important in the discussion that follows, it will be well to repeat it. Proportion, as here used, considers the mesio-distal root diameter in relation to the linguo-labial root diameter. A root is referred to as "wide" if the mesio-distal diameter is longer than average in proportion to the linguo-labial diameter, or "narrow" if the mesio-distal diameter is shorter than average in relation to the linguo-labial diameter. (See Figure 16.)

Size, as the term is here used, pays no attention to the relation between the mesio-distal or linguo-labial diameters. It refers only to the area of the root. Thus a root may be "narrow," and be large or small. It may be "wide," and small or large. There are small roots of similar proportions and small roots of unlike proportions. There are large roots of similar proportions and large roots of entirely different proportions.

Comparative widths of average roots at the enamel line and the necks of popular moulds of porcelain crowns. All are of the same height. Variations in proportion, therefore, show as a difference in width.

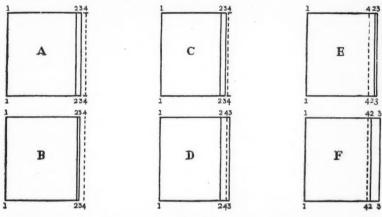


Fig. 16

The six diagrams above are intended to illustrate the proportionate widths of the necks of the 11 most popular moulds in conventional crowns, illustrated on page 347 of the June issue of this magazine, as compared with the average width of upper central, lateral and cuspid roots. For purposes of illustration, the diagrams for roots and crowns have been brought to one common height so that all variation in proportion will appear as a difference in width.

In diagram "A" the rectangle 1-4-4-1 represents the average area of 200 natural upper central roots. The rectangle 1-3-3-1 represents the average proportion of the widest of the 6 crown necks offered by manufacturers "A" and "B," and the rectangle 1-2-2-1 represents

the average proportion of the three narrowest necks among the same moulds.

In diagram "B," the rectangle 1-4-4-1 is the same as in diagram "A." The rectangles 1-3-3-1 and 1-2-2-1 represent the average proportions of the two widest and three narrowest necks of the five most popular moulds of manufacturer "C," as referred to in a previous article of this series.

In diagram "C," the rectangle 1-4-4-1 represents the average proportions of 200 lateral roots at the enamel line. The diagram 1-3-3-1 represents the average of the three widest of the lateral crown necks of manufacturers "A" and "B," and the diagram 1-2-2-1 represents the average proportions of the two narrowest of the crown necks among the best selling moulds of

manufacturers "A" and "B."

In diagram "D" the area 1-4-4-1 is similar to the same area in diagram "C." The area of the rectangle 1-3-3-1 represents the average proportions of the two widest of the lateral crown necks among the five most popular moulds of manufacturer "C"; and the rectangle 1-2-2-1 represents the average proportions of the three narrowest of the necks among the same five

It is evident that in the 11 most popular moulds of conventional crowns, the necks of the upper centrals are too narrow mesio-distally in proportion to linguo-labial width to permit adaptation to central roots of average proportions, to say nothing of roots of more than average width, without the intervention of a coping. This doubtless accounts in no small degree for the dissatisfaction which has been felt by the profession with these crowns.

It is evident, also, from diagrams "C" and "D" that the necks of most lateral crowns are

narrower mesio-distally in proportion to linguo-labial diameter than the average of upper

lateral roots, and every dentist knows that adaptation of such crowns is difficult.

In diagrams "E" and "F" the rectangles 1-4-4-1 represent the proportions of the average natural cuspid root at the enamel line. In diagram "E" the rectangle 1-2-2-1 represents the average proportion of the three narrowest cuspid roots among the crowns offered by manufacturers "A" and "B," while the diagram 1-3-3-1 represents the proportions of the three widest roots. The same numbers apply in the same way to the crowns of manufacturer "C.

In diagram "F," it will be noted that the necks of cuspid crowns are wider mesio-distally than

the cuspid roots.

The practical value of these diagrams depends on the fact that the dentist must make the crown neck cover the end of the root. It a crown neck is too narrow mesio-distally for the average root, the dentist has, for the average case, the choice of selecting a crown of which the neck is as wide mesio-distally as the root and grinding off that portion of the crown which will project on the lingual, if he can do it without spoiling the crown; or of selecting a crown which is of the correct linguo-labial length, and either cutting down the mesio-distal width of the root or making a coping.

If the solution here proposed is to solve the difficulties of producing crown necks suited to the roots of the natural anterior teeth, the difference between size and proportion must be clearly understood.

When Dr. Williams presented his classification of natural tooth forms to the dental profession, he stated his belief that a relatively few forms of artificial teeth, properly selected and made in graded sizes, would serve the requirements of prosthesis better than the many miscellaneous forms then in existence. The forms he suggested have been produced for vulcanite work and have been welcomed by the profession nearly all over the civilized world.

No sooner were the forms for vulcanite work accepted than a demand sprang up for similar forms, similarly classified, in porcelain crowns. The production of crowns introduced an element not present in the teeth for vulcanite plates, that is, the fitting of the crown necks to remaining natural roots. Twenty-five years in active practice had made Dr. Williams thoroughly familiar with all the elements of the dissatisfaction the

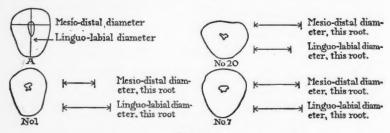


Fig. 17

In the above illustration Diagram "A" shows the location of the root diameters as used in this work.

Diagram No. 1 shows a drawing of root No. 1 in Fig. 18; the root is narrower than average mesio-distally in proportion to linguo-labial length.

Diagram No. 20 is a drawing of root No. 20, Fig. 18.

Diagram No. 7 is of root No. 7, Fig. 18, and closely approximates the average proportions of the roots in Fig. 18, but is somewhat wider mesio-distally than Dr. Black's average.

profession so constantly expressed toward porcelain crowns. He determined to learn whether this dissatisfaction as related to neck sizes was unavoidable, because the causes could not be overcome, or whether suf-

ficient study would make it possible to correct the difficulty. He found that great improvements could be effected.

PROPORTIONS OF CONVENTIONAL CROWN NECKS

Dr. Williams' findings may be briefly summarized as follows:

The roots of natural upper centrals and laterals are wider, mesiodistally, in proportion to the linguo-labial diameter, than crown manufacturers have generally supposed. The neck diameters of the "best sellers" among the conventional crowns appear to have been arbitrarily determined and are not wide enough mesio-distally, in proportion to the linguo-labial diameter. For detailed information see Figure 16. The necks of the conventional upper cuspid crowns are generally too wide mesio-distally in proportion to the linguo-labial diameter.

THE SEARCH FOR INFORMATION

It required two years of practically continuous work to answer the questions "What is the proportion in root diameters?" and "What are the most serviceable proportions and sizes in crown necks?" When found, the answer was very simple.

All of Dr. Williams' work has been founded upon what he has learned by studying natural teeth. He began this special study by selecting 200 natural upper centrals, 200 natural upper laterals, and 200 natural upper cuspids, then measuring the root diameters and making drawings of them. This work required much time and led only to confusion and disappointment because of the widely varying proportions and unlike outline forms met. The centrals were first measured without classifying them as to form, but nothing worth while was learned. They were then classified by type and form and measured. It was learned only that the necks of the tapering type are narrower mesio-distally in proportion to linguolabial diameter than those of the square or ovoid types.

After many fruitless efforts with individual teeth, a simple solution was discovered which seems likely to afford satisfaction. It was to abandon the individual root as a guide in proportion and form, and to depend upon the averages of a large number of roots. To do this, it was necessary to take roots of each kind, centrals, laterals and cuspids as guides, to determine the average proportions of all the roots in each group; to prescribe these average dimensions in graded sizes for the necks of crowns to meet average conditions; to determine the proportions of "narrow" roots and prescribe these proportions for the necks of a few crowns; and to determine the average proportions of a group of "wide" roots and to prescribe these proportions for the necks of a few porcelain crowns.

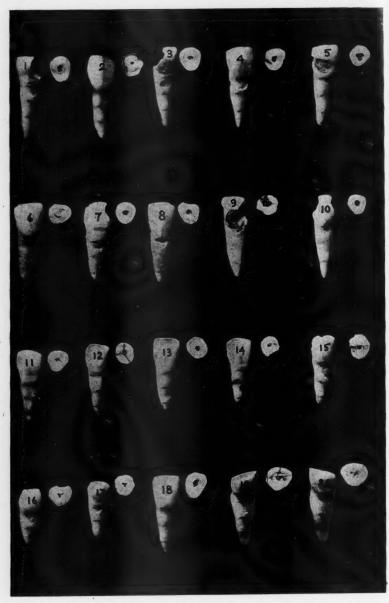


Fig. 18

ROOT PROPORTIONS NATURAL UPPER CENTRALS

The illustration on the opposite page was made several years ago in an effort to determine what were the proportions and outline forms of natural upper central roots. It is the result of double photography. The tooth was first photographed and was then sawed at right angles to the vertical axis at the labial junction of the enamel and cementum. The end of the root at this level was placed beside the photograph of the entire tooth and a second photograph was made. This gives on the left a photograph of each tooth before it was sawed and immediately adjoining it, the photograph of the cross section of the root at the enamel line.

The diameters of the roots in this illustration have been measured and the average propor-

tion of the mesio-distal diameters to the linguo-labial diameters has been determined. Roots Nos. 3-4-5-7-8-10-12-13-14 and 17 present this average. Roots Nos. 6-9-11-10-19 and 20 are wider mesio-distally than this average in proportion to their linguo-labial diameters. Roots Nos. 1-2-15 and 18 are narrower mesio-distally than this average, in proportion to linguo-labial diameters. In this group, as many central roots are wider than the average as are narrower than the average.

Reference to Figure 16 in this issue shows that the necks of the centrals of the eleven of the best selling moulds of porcelain crowns are narrower mesio-distally, in proportion to linguolabial diameter, than the average of upper central roots. In other words, those necks would fit seven out of these 20 roots, necessitating copings for 13 roots. On the basis of Dr. Black's averages, those crown necks would fit only Nos. 10-12-14, necessitating copings for 17 roots out of 20.

This inaccuracy in the proportions of crown necks is one of the most potent causes of dis-satisfaction with the conventional crowns.

This divides root proportions into three groups, and prescribes crown necks for each group. The main group presents average proportions. One small group is narrow mesio-distally, and one small group is wide mesio-distally in proportion to linguo-labial dimensions.

HOW CROWN NECK PROPORTIONS WERE DETERMINED

The mesio-distal and linguo-labial neck diameters of the 200 centrals referred to above were tabulated and averaged. The ratio of one diameter to the other was determined. This ratio was accepted as the average ratio of mesio-distal width to the linguo-labial width in upper centrals. Please observe that it was not a size which was determined, but a proportion. One-half millimeter was added to each diameter to provide a slight excess of porcelain in each diameter for fitting roots slightly out of proportion or irregular in outline. The ratio thus determined is desirable for the great majority of the projected crowns. Crowns with necks of these proportions closely approximate the majority of roots, and are readily adaptable to perhaps 75 per cent. of the roots encountered in practice.

To determine the proportions of roots which were much narrower than the average, the five central roots of the two hundred in which the mesio-distal diameter was narrowest in proportion to the linguo-labial diameter were selected and the proportions averaged. The resulting average proportion with the addition of one-half millimeter of porcelain in each diameter, produced the most desirable proportion for crown necks, narrower than the average.



Fig. 19

ROOT PROPORTIONS NATURAL UPPER LATERALS

This illustration was made at the same time and in the same way as illustration No. 18. The mesio-distal and linguo-labial diameters of the cross sections here shown have been

determined, and the average diameters and proportion for the group have been worked out.

Cross sections Nos. 9-10-16 and 25 closely reproduce this general average. Cross sections

Nos. 3-4-5-6-8-11-12-14-17-18-19-20-21-22 and 23 are narrower than this average for the group.

Cross sections Nos. 1-2-7-13-15 and 24 are wider than this general average.

A reference to diagrams "C" and "D" in Figure 16 will show that the necks of upper laterals of nine out of eleven of the best selling moulds of porcelain crowns are narrower than the average. They would not be wide enough to fit the ten average and wider than average roots of this group, without the aid of copings.

The proportions for crown necks to be wider mesio-distally than linguolabially were determined in a similar manner by selecting the five central roots which were widest in proportion to linguo-labial diameter, averaging the dimensions and determining the proportion. This proportion may be accepted for such crown necks as are to be wider mesio-distally than linguo-labially.

The proportions of lateral and cuspid roots were determined in the same manner, and then used in the same way as the basis for prescribing

the proportions of crown necks.

It cannot be too clearly understood that all this work did not determine a single size; it determined only proportions. These proportions can be applied to large crown necks and small crown necks, but they do not indicate how large or small any crown neck should be. All they did was to establish that if the mesio-distal diameter of a crown neck were known, the linguo-labial diameter should be of a known proportion of that diameter for an average neck, or a greater or less proportion for a narrower or wider neck. They left the question of size untouched. The information they supplied is believed to be entirely new, and is very important.

THE SIZES IN CROWN NECKS

In order to apply the proportions determined as described above, it was necessary to establish the length of one root diameter. It seemed that the mesio-distal diameter could be more easily studied than the linguolabial diameter. After much study the centrals were classified as square, tapering and ovoid. The greatest mesio-distal width of each crown was tabulated beside the mesio-distal width of the root. The proportion of the crown diameter to the root diameter was determined. As the width of the projected crown was known in millimeters, the application of this last determined proportion gave the mesio-distal width of the neck. application of the average or narrow or wide proportions as determined from the roots, gave the linguo-labial dimension of the neck.

In other words, the mesio-distal diameter of the crown neck was deter-

mined by an average of the measurements of several hundred natural teeth. The linguo-labial diameter of the crown neck was determined by the proportions previously carefully worked out. One-half millimeter, equal to one-fiftieth of an inch, was added to each diameter.

Crown necks determined in this way are not offered as a perfect solution to the question of fitting crowns to roots. After nearly five years of pretty constant work on this subject, I am prepared to affirm that no ideal solution is in sight, and I doubt whether one is possible. But any manufacturer who will produce crown necks under the programme here outlined will offer to the profession what we believe to be the most suitable and adaptable crown necks it is possible for the manufacturer to present. Such necks will be fitted to roots more easily, satisfactorily and quickly than those at present obtainable. Figures 16 to 19 present detailed information on various phases of this study.



X-RAY DANGERS*

By Chas. A. Eller, D.D.S., Albuquerque, New Mexico

This is to be a little heart to heart personal talk to all who are interested in the X-Ray. I am not telling this story because of any animosity towards any one in particular, but am telling it so my fellow dentists may know.

Two years ago last May I purchased an X-Ray machine, the best I could buy for dental uses. It came, was a beauty, and in due time was installed. I was taught to use it. I loved it. It worked and does yet beautifully. In talking over proper equipment for this machine the question of proper protection was considered, and I was assured over and over again that I would not need a lead screen, other than the lead glass tube bowl, or protector, that is a part of the equipment.

Thinking, of course, that the men who manufacture and sell the machine ought to know, I did not bother any more about it, and everything went along in smooth order; I was getting good results and was very much pleased.

In May of last year (1918) I noticed a slight breaking out on the fingers of my right hand. This eruption resembled an ivy poison eruption. It was noticeably worse between the fingers. I asked a doctor's opinion about it and he said to paint it with iodine, which I did, but which did no good. It ran on for a couple of weeks and finally became better and by the 25th of June was quite all gone.

I did not know what had caused the trouble but was glad to be rid of it, as it was quite annoying, though had not kept me from operating, but hindered considerably. I went along then for a week or so and on Monday, July 9th, the same fingers broke out again with a similar eruption, though noticeably worse. Also thumb and two fingers of left hand. Thumb and all fingers of right hand.

I went on working but eruption became so bad by Saturday the 14th that I had to close my office. I had an infection from this eruption accompanied by a temperature of 100 degrees before I succeeded in getting treatment to stop same. I was away from the office a week when my fingers were nearly well again. I worked for the rest of July, and the eruption came again as before and I had to close my office. Each time I would work a day and then in the evening the fingers would blister. I tried three times and each time would have to quit. Finally after being out of the office eight whole weeks I tried again and that night they blistered again. I decided then that it was the X-Rays causing the trou-

^{*}Read before the N. M. State Dental Society, June 28, 1919.

ble. I have not made an exposure since the first day of October and my hands have been improving constantly since that time.

Conclusion: The X-Ray certainly had an accumulative effect. Use it a little every day and the effect piles up until in my case it took just one year for it to manifest itself in any way.

In January of 1919 my hands were practically well, yet the skin of the fingers of the right hand would crack quite easily and bother me considerably in that way. Just as it takes time for effects of the X-Ray to manifest itself, apparently so does it take time for it to leave the body. My left hand which was not so bad was quite well in January of 1919, while the right hand which was worse was still getting better.

I have sold my machine and have my work done away from the office, and though it's harder to do things as I want to, I would much rather have my hands than the X-Ray machine and no hands.

The manufacturers certainly make a great mistake when they do not insist upon men using proper lead screen protection. It would not cost them any more and would mean added patronage in the future. The man that says there is no danger from X-Ray, either primary, secondary or tertiary is ignorant of the effects or is trying to sell equipment, not caring for results to his customer.

Of course, some people may and must be supersensitive to rays but it only takes time to find out who they are, and by that time the danger is done, at least temporarily.

When I equip again with a machine I shall certainly fix it so that it will be impossible for me to turn on rays except I stand in a lead cabinet that excludes rays from every side and the top. I will take no chances in the future. I would not even do that much under a year or perhaps two. The symptoms were hardly the same as any text book describes, and yet one page in Dr. Howard R. Raper's book on Dental X-Rays nearly describes my case.

One doctor who has charge of a T. B. Sanitarium in talking of symptoms, hit the nail when he said "Symptoms Hell! the book says nothing about headaches, and yet every time I take a chest picture I get a headache."

I described my case to an eminent X-Ray man in Baltimore, Md. This man has lost a finger or two, his hands are excellent samples of what X-Ray burns will do for a man, yet he was sure I did not have an X-Ray burn. Perhaps I did not have, but I certainly had an acute X-Ray dermatitis, that if kept up would have resulted in a burn and perhaps cancer of hand or hands. After talking to this man I was in Birmingham, Ala., and visited a Dental X-Ray specialist who did not have complete lead protection, and his hands were exact duplicates of what mine were at their worst stage.

This backing up of my own case is sufficient proof to me, wiser men notwithstanding, that I had at least a case of acute X-Ray dermatitis. This may have been in a mild form, but it does not make much difference, mild or severe, if your hands get in such a condition that you are not able to work, to say nothing of further dangers, that we are told may result from X-Rays carelessly used.

We do not know all about the X-Ray as yet; we are only just beginning in its uses, compared to what may come of it in the future. It is a great boon to humanity. I can't express in words how much I think of it as an adjunct to dentistry, but with all this, if we do not have proper protection, our ranks will be thinned in the next few years, by men becoming unable to practise, is my firm belief. I don't wish to give the idea that you as dentists ought not to have an X-Ray machine; on the other hand I think it is impossible to practise dentistry as it should be practised now without one, or without the use of one, but what I am working for is that every man who has a machine have adequate lead protection from the rays.

I wish to repeat that we don't know much about X-Rays yet. So what each of us learns, added to what the other fellow already knows, may some time make a good criterion to follow, but as for me I'll insist upon being behind a good thick lead screen before the current is turned on.

DENTISTS' ASSISTANTS

By Dr. C. Wesley Siefkin, Rolfe, Iowa

No time since I began the study of dentistry has the necessity of well-trained assistants been realized as it is to-day. In the past, any girl who could be on duty when the dentist was out was considered enough. But to-day with the eyes of the entire medical profession, and even the world, turned to the teeth as the cause of so many bodily ailments, and the numerous equipments of a modern office, the dentist's time is too valuable to spend on the things which a well-trained assistant can do as well and even better than himself. The fact that schools of instruction are being given over the entire country for the purpose of training assistants, shows the need of some standard course which will qualify assistants to go into a new office and become of use without months of training for each individual operator. Many men have not the tact nor the patience to train an assistant until she is useful, but would willingly employ one if she were trained. This training requires first, a selection of a person who

will remain on the work a reasonable length of time to justify the training. Second, patience with mistakes; do not expect an assistant to do in a few weeks the things that you have acquired in years of practice. Third, it means the wasting of valuable material. When you have spent months in this way, and your judgment has been correct in your selection, you will have an assistant who will repay you for the time spent and bring you in return dollars where she received cents, besides relieving you of the strain and the petty things around the office. Should your selection have been bad, and she go elsewhere or get married just when she is of use to you, you may well become discouraged and decide to work alone in the future. The schools under my observation, while having their good points, have been of too rambling a character and out of reach of the average assistant for the ordinary office.

The training of an assistant has been a hobby of mine for a good many years, and I am going to give my method in the hope that it may be of some help to those who have tried and given up, and I personally know

many such people.

First, I select the girl from a number of applicants, and I am not in a hurry as this is the most important part of all. I prefer a girl rather than a man, although I have had a number of applications from men. Applicant should be between sixteen and twenty-three years of age, in ordinary health, have good morals, and a certain degree of refinement. She should be of medium height, good appearance, and have a good set of teeth. I never considered a bald-headed barber was much of an advertisement for a hair tonic. When I have selected a girl with the above qualifications, I try to obtain the following information: Has she any other work in view within a short time, and if she intends going to school in the fall? I consider her no farther, as it is not worth my time to train her if her mind is elsewhere. Does she intend getting married soon? This may seem a prying question, but it is of vital importance to me, and she will give the information when she knows why I ask. I will employ no girl who will not agree to remain with me at least one year. When my selection is made we agree on compensation for the beginning, and we have our first talk. I tell her that everyone is not fitted for an assistant, and if in two or three weeks I find that she is not in the right place, I will tell her. She is on probation, and if I feel obliged to let her go she will not feel that I have taken advantage of her. On the other hand, I tell her that if she does not like the work or me, to tell me; this gives us both a chance to quit. Tell her the duties ranging from the receiving of a patient to the dismissal, and that the happenings of the office are not for general publication.

When I have given her an outline of these, I let her have her own way

until she has become acquainted. Then I smooth out the rough places, beginning at the bottom of each I show her the best way to receive the patients in the reception room; the best way to answer the telephone; how to mix amalgam and why mixed so; cement, and why powder is added in small quantities; in mixing plaster why it is sifted into the water. Then let her mix some cement adding large portions of powder. Also let her add large portions of plaster to the water and beat it instead of stirring. This shows her the bad results, and impresses it upon her mind as nothing else will do, and gets her interested. If you begin by teaching her the fundamental principles at first, she will soon do the most difficult things about the office better than you can. Teach her the surfaces of the teeth, the number of temporary teeth, when cut and when shed, and also the permanent set. Then when a mother asks her if it is time for her baby to cut a certain tooth, she can give an intelligent answer. Teach her the bone and nerve supply of the face; this brightens her and brushes you up also. The more you give the more you will receive.

Let her pay the rent, keep the books, and if she makes an occasional error don't make her feel worse, she feels bad enough, and did not do it on purpose. You would not want all your mistakes aired. If there is a picnic let her off; if sick don't dock her every time. Give her a vacation on full pay. Pay her a living wage and something to look forward to, and as she becomes more efficient give her the entitled increase without being asked for it. I consider it a good investment to give my assistant a share in the profits over a certain amount; this gives her something to look forward to when she works harder. In fact, when she is interested in my business and responsible, I let her run the office as she would her own home and when she sees the need of something to better it, she goes and gets it.

I consult her judgment on pieces of work, shades of teeth, prominence in dentures, etc., which I find of great benefit to me in many cases. If you follow these rules, you will find that there is only one man who can get her away from you, and that is the man she marries.

AUGUST

Rejoice! ye fields rejoice! and wave with gold,
When August round her precious gifts are flinging;
The ripened grain is slowly homeward rolled—
The sunburnt reapers jocund lays are singing.

AN INLAY METHOD WITH GOLD FOIL

By H. F. CHAIKEN

My object in presenting this article is to describe a method of obtaining a good fitting inlay at the most troublesome points. It may be a little more difficult, but this should not be taken into consideration.

When I say a good fitting inlay, I mean one that will not show a cement lining and be perfectly adapted at the gingival margin. Every one will admit that there is a change occurring during the heating and casting process. The most unfortunate thing is that the greatest change occurs at the gingival margin. To my mind it seems that it is not so much the fault of the contraction of the gold as it is the difficulty on the part of the operator to obtain a perfectly adapted gingival margin with the wax; and secondly, due to a distortion of the mold during heating process, rather than a contraction of the gold.

I know that some operators will ask why I do not cast into a cold mold? Let me state right here that Professor Addie has proven by experiment that "An Inlay is always cast into a hot mold," and I absolutely agree with him.

Those who advocate casting into a cold mold forget all about the fact that even after they let the mold cool, they bring this mold to about the same temperature, when they begin to mold the gold, as it was when they removed it from the flame to cool. So we see that an inlay is cast into a hot mold after all, or as I may call it, a distorted mold.

Although experiments and developments of investment materials have shown that a good investment properly compounded will resist heat necessary to reduce gold to a molten state without much variation, yet danger is encountered. Should such an investment be carelessly mixed, disregarding amount of water and proper temperature, the change will be still greater.

As far as I know nearly all inlays are manipulated under moisture. The cavity is moist with an oily substance (glycerine) and wax is introduced. This oily liquid takes up some space, and furthermore causes the wax to pull away from the margins. In other words, there is already a space formed between the walls of cavity and wax mass. Then during the carving process there is a slight tortion produced, no matter how careful we are to make the wax mass stable, because the wax is slippery and slightly loose. The changes during the investing and heating process put the finishing touches to the inlay.

The method that I am going to describe does away with the above mentioned difficulties to a great extent, if not entirely.

After the cavity has been prepared in the usual way, I take a cylinder

of gold foil (cohesive) and cut off a piece long enough to cover the walls of the cavity all around. One end of the cylinder is wedged within the anchorage point with a pellet of cotton. From that point I follow the margin of the cavity with the foil, adapting it thoroughly especially at the gingival border.

The cylinder of gold should be so bent that it will slightly overhang the margins. This has a two-fold purpose. First, the slight overhang will act as a guiding line not to leave too much of an excess at one place and a short margin in other places. Secondly, the overhang of the foil will adapt itself so perfectly in the finishing that it will look like a gold filling. I neglected to state that the tooth must be kept absolutely dry, or the foil will not adapt itself to the walls. This dryness also does away with the space that is formed when the wax pattern is manipulated in a moist cavity, and will also cause the wax to remain stable during the carving. It is not necessary to have the cavity moist, as you will find that the entire cavity is practically lined with the foil. If there is a point that is not, it will not interfere with the removal of the pattern.

As soon as the gold foil has been adapted, I take a piece of inlay wax, conform it to the shape of the cavity and get the surface that is to come in contact with the walls almost flowing, and quickly introduce it into the cavity. It is absolutely essential that one side of the wax should be hard to equalize the pressure. Trim, finish and remove pattern in the usual manner.

I will now outline the advantages of this method:

A—Instead of casting the Gold into a distorted mold of investment material you cast the metal into a gold matrix.

B.—We establish clean, well adapted margins, especially at the gingival.

C.—Ability of manipulating the wax under dry conditions.

D.—Property of Gold foil to be adapted to tooth tissue better than any other form of Gold.

All these details must be taken care of, since perfection means attention to minute details.

SUMMER

How beautiful is summer! Who does not, at this period, admire all nature teeming with life and replete with energy? At this time the richest wealth to earth is given, and the soul, as if in unison with the beneficence of its genial glow, offers up a prayer to the Source of all this beauty and splendor.



DENTAL LICENSE REQUIREMENTS IN THE UNITED STATES OF AMERICA

BY ALPHONSO IRWIN, D.D.S., CAMDEN, N. J.

ASSISTANT DENTISTS

(Continued)

Iowa: Revised Jan. 1, 1918. Section 2600-01. Posting of License and Names of Those Employed. Every person who shall practise dentistry, either personally or as proprietor, employe, or assistant, shall keep his license in open view in his operating room; and if he owns, operates or controls a dental office, where any one other than himself is practising dentistry, he shall also cause to be displayed, and keep in a conspicuous place at the entrance of his place of business the name of each and every person employed by him in the practise of dentistry at that place. (35 G. A., ch. 218, Par. 2.)

Section 2600-02. Employment of Unlicensed Dentist—Laboratory Work. It shall be unlawful for any person owning, or conducting a dental office where dental work of any kind is done, or contracted for, to employ, retain or permit any unlicensed dentist to practise dentistry in such dental office, contrary to the provisions of this act, but nothing in this act shall be construed to prevent a person not a licensed dentist from doing laboratory work. (35 G. A.; ch. 218, Par. 3.)

Section 2600-03. Recording License—Forfeiture—Change of Residence—Record. The license issued to any dentist by this state shall within six months after its issue be filed for record with the clerk of the district court in the county where said licensed dentist desires to practise dentistry; and failure to so file such license for record within six months after its issue shall incur a forfeiture thereof, and said license shall not be restored by the board, except upon the payment to the board of the sum of twenty-five dollars as penalty therefor; and should said licensed dentist change his place of business to any other county within the state of Iowa, he shall within three months, file his license for record with the clerk of the district court of such new residence, and the clerk of the court shall be entitled in all instances to a fee of fifty cents for recording such license. The clerk of the district court shall keep, as a part of the record, an alpha-

betical index, giving the names of the licensed dentists and a reference to the pages in the record wherein a copy of their licenses can be found. Upon the application of the state board of dental examiners, the clerk of the district court shall furnish said board with information as to whether or not any party named has filed his license in said county, together with the date of said license, and the date of recording, which information shall be furnished without expense to the state board of dental examiners. (35 G. A., ch. 218, Par. 4.)

Section 2600-04. Violation—Penalty. It shall be unlawful for any person to practise dentistry in this state without having first complied with all the statutory provisions regulating the same, and any person who shall violate any of said statutory provisions shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not less than fifty dollars, nor more than five hundred dollars, or by imprisonment in the county jail not more than sixty days, or by both such fine and imprisonment. (35 G. A., ch. 218, Par. 5.)

Kansas: The dental law approved 1909 does not appear to contain any specific clause regulating the employment of assistants.

Kentucky: No clause specifically referring to the employment of assistants in the law enacted March, 1912.

Louisiana: The dental law amended 1906 does not appear to contain any proviso regulating specifically the employment of assistants.

Maine: Law approved April 1st, 1915. Section 19. Any person who practises dentistry without obtaining a certificate required by law, or whoever, being manager, proprietor, operator or conductor of a place for performing dental operations, employs a person who is not a lawful practitioner of dentistry in this state to do dental operations as defined in section eleven of this act, or permits such persons to practise dentistry under a false name, or assumes a title or appends or prefixes to his name the letters which falsely represent him as having a degree from a dental college, or who impersonates another at an examination held by the Board of Dental Examiners or who knowingly makes a false application or false representation in connection with such examination, shall be fined not less than one hundred nor more than three hundred dollars, or be imprisoned not less than thirty days, or both. A subsequent conviction shall be punished by the maximum penalties prescribed in this section, and the offender be required to furnish a bond in sufficient amount to deter him from further unlawful practice.

Maryland: The dental law of 1896 now in force in the state of Maryland does not contain any proviso making specific reference to the employment of assistants, but the wording of Section 10 is such that it is capable of being interpreted as covering "salary" dentists.

Section 10. Every person shall be said to be practising dentistry within the meaning of this Act who shall, for a fee, salary or other compensation, paid either to himself or to some one else for services rendered, perform operations or parts of operations of any kind pertaining to the mouth, treat diseases or lesions of the human teeth or jaws, or correct mal-positions thereof.

Section II. Any person who shall violate any of the provisions of this Article shall be deemed guilty of a misdemeanor, and, upon conviction thereof, in any court having criminal jurisdiction, shall be fined not less than fifty dollars or more than three hundred dollars, or be confined not more than six months in the county jail, or if the conviction takes place in Baltimore city in the Baltimore city jail, in the discretion of the court. All fines received under this Act shall be paid into the common school fund of the city or county in which such conviction takes place.

Massachusetts: May 31st, 1915. Section 4. The board shall publish every three years complete lists of the names and office addresses of all dentists registered and practising in the state, arranged alphabetically by name and also by the cities and towns in which their offices are situated. The board shall have power to call for and require a registration whenever it deems it necessary or expedient to secure accurate lists of the registered dentists practising in this commonwealth, with their office addresses. Every dentist when he begins practise, either by himself or as an assistant, shall forthwith notify the board of his office address. Every registered dentist shall exhibit his full name in plain readable letters in each office or room in which his business is transacted. Any dentist failing to comply with the requirements of this section may be punished by a fine not exceeding fifty dollars.

Section 9. No person not a registered dentist shall, directly or indirectly, practise dentistry in this commonwealth, except as is provided in this act; but the widow, executor or administrator of a registered dentist who has died, or the wife of one who is incapacitated, may continue his business under a registered dentist. It shall be unlawful for any person to operate any dental office under any name other than the name of the dentist or dentists actually owning the practice, or a corporate name containing the name of such dentist or dentists.

Section 10. Any person who owns or carries on a dental practice or business, or who by himself, by his servants or agents, or by contract with

others, shall perform any operation or make examination, with the intent of performing or causing to be performed, any operation on the human teeth or jaws, or who shall describe himself by the words or letters "dentist," "D.D.S.," or other like words, letters or title in connection with his name, or who shall advertise by sign, card, circular, pamphlet or newspaper, or otherwise indicate that he by contract with others, or by himself, his servants or agents, will perform any operation or make examination, with the intention of performing or causing to be performed any operation on the human teeth or jaws, shall be deemed to be practising dentistry within the meaning of this act, and, unless duly authorized thereto by a certificate as provided in this act, shall be liable to punishment as herein provided, and whoever in practising dentistry as above defined owns and carries on a dental practice or business, and in such business employs or permits any other person to practise dentistry as above defined, unless such other person is duly certified and exhibits his name and certificate as herein provided, or who fails to exhibit his name as required by this act, shall for each offense be liable to punishment as herein provided. The word "person" in this act shall include a corporation; and any corporation violating any provision of this act shall be liable to a fine as herein provided, and the officers of the corporation concerned in such violation shall be liable to fine and imprisonment as Herein provided.

Michigan: Law 1913. Section 4. The board of dental examiners provided for in this act shall have power to revoke or suspend the license of any dentist for any of the following causes:

First, His conviction of a felony or misdemeanor involving moral turpitude, in which case a record of conviction or a certified copy thereof, certified by the clerk of the court or the judge in whose court the conviction is had, shall be conclusive evidence.

Second, For any violation of the provisions of this act.

Third, For unprofessional conduct, or for gross ignorance or inefficiency in his profession.

Unprofessional conduct shall mean, employing what are known as "cappers" or "streeters" to obtain business; or obtaining of any fee by fraud or misrepresentation; wilfully betraying professional secrets; employing directly or indirectly any student, or any suspended or unlicensed dentist to perform operations of any kind, or to treat lesions of the human teeth, or jaws, or to correct malposed formations thereof, except that an unlicensed person may perform merely mechanical work upon inert matter in a dental office or laboratory; the advertisement of dental business or treatment or devices in which untruthful

or impossible statements are made, or habitual intemperance or gross immorality.

Section 7, 4th Paragraph. It shall be unlawful for any person to practise or attempt to practise dentistry either as proprietor, employe or assistant, without keeping his license in open view in his operating room. Every person, persons or corporation who is the proprietor of or who controls any dental office or parlors, doing business in this State, shall promptly report to the State Board of dental examiners the name or names of all registered dentists in his employ, together with their place of residence, and when said registered dentists shall leave the employ of said person, persons, or corporation aforesaid, said facts shall be promptly reported to the State Board of dental examiners.

Section 9. Any person who shall practise or attempt to practise dentistry either as proprietor, employee or assistant, without having a license or without keeping his license in open view in his operating room, in accordance with the provisions of this act, and any person who shall practise or attempt to practise dentistry either as proprietor, employee or assistant, after his license has been revoked, in accordance with the provisions of this act, and any person who shall in any way violate any of the provisions of this act shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not more than five hundred dollars and costs of prosecution, or by imprisonment in the county jail for not more than ninety days, or both such fine and imprisonment, in the discretion of the court.

Missouri: Law April 10th, 1917. Section 5493. Board has power to revoke—when.—Said dental board shall have power to revoke a certificate of registration or a license issued thereon upon any one of the following causes:

5. Or if such licensee or registered dentist shall employ or permit any person not regularly registered and licensed to practise dentistry to practise the same in the office or under the control or direction of such licensed or registered dentist.

Section 5495a. Violations—penalty.—It shall be unlawful for any person or persons to practise, or offer to practise, or to hold themselves out as practising dentistry or dental surgery under any name except his or her own proper name, which shall be the name used in his or her certificate of registration as a dentist and in the license granted to him or her as a dentist, as provided for in this article. It shall be unlawful for any person or persons in this state to use the name of any company, association, corporation, trade name or business name, or to operate, manage or be employed in any room or rooms or office where dental work is done or

contracted for, or advertised to be done, or where salaried solicitors are employed, under the name of any company, association, corporation, trade name or business name. Any person or persons practising or advertising as practising, dentistry or dental surgery shall practise and advertise to practise same only under his or her own proper name as is stated in the certificate of registration and license issued under the provisions of this act. Any person violating the provisions of this section shall on conviction be adjudged guilty of a misdemeanor and be punished according to the provisions of this act.

Minnesota: Law of 1911. Section 2319. Prohibition-Penalties-Disposition of Fines-No person shall practise dentistry in the state without having complied with the provisions of this subdivision. Any person who shall practise, or who shall attempt to practise dentistry, either as a proprietor, employe or assistant, shall keep his annual renewal license in open view of his operating room, failing to do so he shall be deemed guilty of a misdemeanor. Any licensed dentist, proprietor, partnership, association, or corporation owning, running, operating or controlling any room or rooms, office or dental parlors where dental work of any kind is done, or provided for, or contracted for, who shall employ, keep, or retain, contrary to the provisions of this law, any unlicensed dentist shall be guilty of a misdemeanor. Any person who shall falsely pretend that he holds a certificate of registration from the Board, or shall violate any of the provisions of this section shall be guilty of a misdemeanor. The Board may, when it deems best for the enforcement of the law, employ such attorney as the Attorney General shall appoint. All fines collected under the provisions hereof shall be paid into the school fund of the county in which the conviction occurred.

Section 8. This act shall take effect and be in force from and after its passage.

Approved April 18, 1911.

Mississippi: The dental law of 1912 does not appear to provide any specific clause in reference to the employment of assistants.

Montana: Law amended 1909. Section 1581. All persons shall be held to be practising dentistry, within the meaning of this Act who shall receive a fee or salary, or other rewards, paid either to him or to another person for operations or parts of operations of human teeth or jaws, or in the correction of the malpositions thereof. But nothing in this article shall be construed to permit the performance of indepen-

dent dental operations by unlicensed persons under the cover of a named registered practitioner or in his office.

Nebraska: Law received 1919; undated. 2795 Section 86. Dentist and Dentistry—License. It shall be unlawful for any person to engage in the practise of dentistry in the State of Nebraska, unless such person shall have obtained a license from the State Board of Health, countersigned by its dental secretaries duly appointed under the provisions of this article.

2812 Section 103. Acts Prohibited. Any person shall be guilty of a misdemeanor, and upon conviction thereof shall be punishable with a fine of not less than fifty dollars, or more than five hundred dollars, or by imprisonment for not less than five days nor more than ninety days in the county jail, or both by fine and imprisonment, who:

Eighth—Shall engage in the practise of dentistry under any title without causing to be displayed in a conspicuous manner and in a conspicuous place in his or her office the name of each and every person employed in

the practise of dentistry therein; or,

Ninth—Shall within ten days after demand, made by the Secretary of the Dental Secretaries, fail to furnish to said Dental Secretaries the name and address of all persons practising or assisting in the practise of dentistry in the office of said person, at any time within sixty days prior to said notice, together with a sworn statement showing under and by what license or authority said person or said employee is and has been practising dentistry; or,

Tenth—In practising dentistry in the state without a license, or after

his or her license has been revoked or suspended.

Nevada: 1913. Section 12. Any and all persons shall be understood to be practising dentistry within the meaning of this Act who shall for a fee, salary or reward, paid directly or indirectly, either to himself or to some other person, perform operations of any kind upon or treat diseases or lesions of the human teeth or jaws, or correct malpositions thereof or display a sign, or in any way advertise himself as a dentist; but nothing in this Act contained shall prohibit bona fide students of dentistry from operating in the clinical department or the laboratory of a reputable dental college, or an unlicensed person from performing merely mechanical work upon inert matter in a dental office or laboratory; or the student of a licentiate from assisting his preceptor in dental operations while in the presence of and under the personal supervision of his instructor; or a duly licensed physician from treating diseases of the mouth, or performing operations in oral surgery. But nothing in the pro-

visions of this Act shall be construed to permit the performance of dental operations by any unlicensed persons under cover of the name of a regular practitioner of dentistry.

Section 13. Any person, company or association shall be guilty of a misdemeanor and upon conviction thereof shall be punished with a fine of not less than fifty (\$50) dollars or more than five hundred (\$500) dollars, or by imprisonment for not less than five (5) days nor more than six (6) months in the county jail, or by both fine and imprisonment, who. . . 8. Shall engage in the practise of dentistry under any title or name without causing to be displayed in a conspicuous manner and in a conspicuous place in his or her office the name of each and every person employed in the practise of dentistry therein, together with the word "mechanic" or "apprentice" after the name of each unlicensed person employed; or o. Shall within ten days after demand, made by the Secretary of the Board, fail to furnish to said Board the name and address of all persons practising or assisting in the practise of dentistry in the office of said person, company or association, at any time within sixty days prior to said notice, together with a sworn statement showing under and by what license or authority said person, company or association, and said employee are and have been practising dentistry, but said affidavit shall not be used as evidence against such person, company or association in any proceeding under this section.

New Hampshire: 1913. Section 16. Any association or company of persons, whether incorporated or not, who shall engage in the practise of dentistry under the name of company, association or any other title, shall cause to be displayed and kept in a conspicuous place at the entrance of its place of business, the name of each and every person employed in said company or association in the practise of dentistry at such place of business, and any one so employed by said company or association whose name shall not be so displayed as above provided, and the said association or company, if incorporated, or the persons comprising the same if not incorporated, shall, for the failure to display the aforesaid names, be deemed guilty of a misdemeanor, and upon conviction thereof, each shall be punished as for a violation of the provisions of this act, as provided in section 14. Any manager, proprietor, partnership, association, or incorporation owning, running, operating or controlling any room or rooms, office or dental parlors, whose dental work is done, provided or contracted for, who shall employ, keep or retain any unlicensed person or dentist as an operator, or who shall fail, within ten days after demand made by the secretary-treasurer of the New Hampshire State Dental Board in writing sent by registered mail, addressed to any such manager, proprietor,

partnership, association, or incorporation at said room, office or dental parlor, to furnish to said secretary-treasurer the names and addresses of all persons practising or assisting in the practise of dentistry in his place of business or under his control, together with a sworn statement showing by what license or authority said persons are practising dentistry, shall be guilty of a misdemeanor and subject to the penalties provided for in this act for a violation of the provisions thereof; *Provided, however*, that such sworn statement shall not be used as evidence in any subsequent court proceedings.

New Jersey: 1917. . . . 9. That hereafter it shall be the duty of every person practising dentistry within this State upon demand in writing made by the secretary-treasurer of said board, to furnish, within thirty days after said demand, to said secretary-treasurer of said board, the name and address of each and every person practising dentistry, or assisting in the practise thereof, in the office of said person. For failure so to do, the said person shall be liable to a penalty of twenty-five dollars, besides costs.

- ro. Every association or company of persons, whether incorporated or not, engaged in the practise of dentistry under any association or corporate name, or under any name other than the true names of all of the individuals composing said association or company, shall cause to be displayed and kept in a conspicuous place, at the entrance to its place of business, the names of each and every person engaged in the practise of dentistry at such place of business, including the members or officers of said association or company, and the employees thereof. No person shall practise dentistry as a member, officer, or employee, of any such association or company unless his name is conspicuously displayed as required by this section. Any person, association or company who shall fail to perform any duty required by this section, or who shall violate any provision of this section shall be subject to a penalty of one hundred dollars for the first offense and to a penalty of five hundred dollars for the second and each subsequent offense.
- act, unless licensed so to do. No person shall employ for a stated salary or otherwise, or give aid, or assist any person not regularly licensed to practise dentistry to perform any dental operation upon human beings in this State. Any person who shall violate any of the provisions of this section shall be subject to a penalty of one hundred dollars for the first offense and of five hundred dollars for the second and each subsequent offense.
 - 12. This act shall not be construed to prohibit an unlicensed person

from performing mechanical work upon inert matter in a dental office or laboratory; or to prohibit a duly licensed physician from treating the diseases of the mouth or performing operations in oral surgery; nothing in the provisions of this act shall be construed to permit the performance of dental operations by any unlicensed person under cover of the name of a registered practitioner; any person shall be regarded as practising dentistry within the meaning of this act who shall advertise by sign, card, circular, pamphlet or newspaper, or otherwise indicate that he will perform by himself or his agents or servants any operation on, or make examination of, with intent of performing or causing to be performed any operation on the human teeth or jaws, or who is manager, proprietor or conductor of a place where dental operations are performed, or who shall use the words or letters "Doctor of Dental Surgery," or "D. D. S." or "D.M.D." in connection with his or her name, or any other title intended to imply or designate him or her as a practitioner of dentistry. or who in connection with such title or titles, or without the use of such title, or any of them, shall treat or profess to treat, either by himself or his agent or servant, or as agent or servant of another, any of the diseases or lesions of human teeth or jaws, or extract teeth, or shall prepare or fill cavities in human teeth, or correct the malposition of teeth, or supply and insert artificial teeth, crowns or bridges as substitutes for natural teeth, or perform any operation or make examination of with the intent of performing or causing to be performed any operation on the human teeth or iaws.

13. Any person, company or association shall be guilty of a misdemeanor, and upon every conviction thereof shall be punished with a fine of not less than five hundred dollars, or by imprisonment for not less than six months, or by both fine and imprisonment, who (misdemeanors named).

New Mexico: New Law (no date attached); received April 26, 1919. No specific Act relating to the employment of Dental Assistants. Section 11 reads as follows, however: It shall be unlawful for any person or persons to practise dentistry or dental surgery under the name of any company, association, or corporation, and any person or persons practising or offering to practise dentistry or dental surgery, shall practise under his or her own respective name or names only.

Penalty for violations: Fine of not less than fifty dollars nor more than two-hundred dollars for each offense; or imprisonment in the county jail for not less than one month nor more than six months, or both such fine and imprisonment in the discretion of the court trying such case. (Abstract from Section 12.)

New York: 1916. Every practitioner of dentistry must display conspicuously upon the house or in the dental office wherein he practises his full name. If there are more dental chairs than one in any dental office the name of the practitioner practising at each chair must be displayed conspicuously on or by said chair in plain sight of the patient. Any person who shall practise dentistry personally or by hiring or procuring another to practise, and shall fail so to display or cause to be displayed the name, license and registration certificate of himself and any person practising or employed to practise as a dentist or dental hygienist in his dental office or any dental office under his control, shall be guilty of a misdemeanor and punishable upon a first conviction by a fine of not less than fifty dollars or more than five hundred dollars, or by imprisonment for not more than one year, and upon every subsequent conviction by a fine of not less than one hundred dollars, or by imprisonment for not less than sixty days, or by both fine and imprisonment. Any person who shall employ, hire, procure, or induce one who is not duly licensed and registered as a dentist to practise dentistry, or shall aid or abet one not so licensed and registered in such practice shall be guilty of a misdemeanor and punishable by a fine of not less than fifty dollars or more than five hundred dollars, or by imprisonment for not more than a year, or by both such fine and imprisonment; providing that a person practised upon by an unlicensed or unregistered dentist shall not be deemed an accomplice, employer, hirer, procurer, inducer, aider, or abettor within the meaning of this section.

B. A person shall be deemed guilty of a misdemeanor, and upon every conviction thereof shall be punished by a fine of not less than two hundred and fifty dollars, or by imprisonment for not less than six months, or by both fine and imprisonment, who. . . . 4. Shall practise dentistry under a false or assumed name or under the license of registration of another person of the same name or under the name of a corporation, company, association, parlor or trade name; provided that legally incorporated dental corporations existing and in operation prior to January first, nineteen hundred and sixteen, may continue so operating while conforming to the provisions of this act. Their advertising subject to the rules of the regents, and employes of said corporations shall be licensed and registered dentists, and corporations that cease to exist or operate for any reason whatsoever shall not be permitted to resume operation.

North Carolina: Law 1915. Section 21. If any person shall practise or attempt to practise Dentistry in this State, except extracting teeth, without having first passed the examination and obtained a license and registered the same as is provided in this Act, or shall violate any of the provisions of this Act for which no specific penalty has been provided herein, he

or she shall be guilty of a misdemeanor and upon conviction thereof shall be fined twenty-five (\$25) dollars for the first offense; Provided, that if any person having once been convicted of practising dentistry contrary to this Act, or contrary to the provisions of Section three thousand six hundred and forty-two of the Revisal of North Carolina of one thousand nine hundred and five, shall practise or attempt to practise dentistry in violation of the provisions of said Section three thousand six hundred and forty-two, or the provisions of this Act, shall be guilty of a misdemeanor and upon conviction thereof, for the second offense and for each succeeding offense thereafter, shall be fined and imprisoned in the discretion of the court. That each act of dentistry shall be deemed a separate offense and constitute a practise of dentistry in the meaning of this Act; and each day that a person shall hold himself or herself out as practising in any name except his or her own shall be deemed a separate offense. The opening of an office or dental parlor for the practise of dentistry, or the practise of dentistry without opening an office or parlor, or to announce to the public in any way a readiness to do any art or thing defined herein as being dentistry shall be deemed to engage in the practise of dentistry within the purview of this Act.

Section 22. Whenever it shall appear to the North Carolina State Board of Dental Examiners that any licensed dentist practising in the State of North Carolina has been guilty of fraud, deceit or misrepresentation in obtaining license, or of gross immorality, or is an habitual user of intoxicants or drugs, rendering him unfit for the practise of dentistry, or has been guilty of malpractice, or is grossly ignorant or incompetent, or is guilty of wilful negligence in the practise of dentistry, or has been employing unlicensed persons to perform work which under this Act can only be legally done by persons holding a license to practise dentistry in this State; or of practising deceit or other fraud upon the public or individual patients in obtaining or attempting to obtain practice; or of false notice, advertisement, publication, or circulation of false claims, or fraudulent, misleading statements of his art, skill or knowledge, or of his methods of treatment or practice, or shall be guilty of any offense involving moral turpitude, they shall revoke the license of such person; an accusation may be filed with the secretary-treasurer of the North Carolina State Board of Dental Examiners, charging any licensed dentist with the commission of any of the offenses herein enumerated, such accusation to be in writing, signed by the accuser and verified under oath.

North Dakota: Law in effect January 1, 1919. Section 8. Unlawful to Practise Without License. Penalty for Violation of this Act. It shall be unlawful for any person to practise dentistry in this state without

having a license so to do from the state board of dental examiners, evidenced by a certificate or renewal thereof as hereinbefore provided; or after the license of such a person has been revoked. Any person who shall practise, or attempt to practise, dentistry in this state, either as a proprietor, employee or assistant, shall keep the annual renewal of his certificate in open view in his operating room. No dentist, proprietor, partnership, association or corporation, owning, running, operating or controlling any rooms or room, office or dental parlors, where dental work of any kind is done or provided for or contracted for, shall employ, keep or retain, contrary to the provisions of this act any unlicensed dentist, or person, doing, or attempting to do, any dental work. Any person guilty of a violation of any of the provisions of this act is guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than \$50 nor more than \$300 or by imprisonment in the county jail not less than ten days, nor more than thirty days, or by both, in the discretion of the court.

Ohio: 1915. Section 1329. A person shall be regarded as practising dentistry who is manager, proprietor, operator or conductor of a place for performing dental operations or who, for a fee, salary or other reward paid or to be paid either to himself or to another person, performs dental operations of any kind, treats diseases or lesions of human teeth or jaws, or attempts to correct malpositions thereof, or who uses the words "dentist," "dental surgeon," the letters "D. D. S.," or other letters or title in connection with his name, which in any way represents him as being engaged in the practise of dentistry.

Section 1329-1. It shall be unlawful for any person or persons to practise or offer to practise dentistry or dental surgery, under the name of any company, association, or corporation, and any person or persons practising or offering to practise dentistry or dental surgery shall do so under his name only; any person convicted of a violation of the provisions of this section shall be fined for the first offense not less than one hundred dollars, nor more than two hundred dollars, and upon a second conviction therefor, his license may be suspended or revoked, as provided in section 1325 of this act.

Section 12711. Whoever engages in the practise of dentistry and fails to keep displayed in a conspicuous place in the operating room in which he practises, and in such manner as to be easily seen and read, the license granted him pursuant to the laws of this state shall be fined not less than fifty dollars nor more than one hundred dollars.

Section 12712. Whoever sells or offers to sell, a diploma conferring a dental degree, or a license granted pursuant to the laws of this state, or

procures such diploma or license with intent that it shall be used as evidence of the right to practise dentistry as defined by law, by a person other than the one upon whom such diploma was conferred or to whom such license was granted or, with fraudulent intent, alters such diploma or license, or uses or attempts to use it when it is so altered, shall be fined not less than one hundred dollars nor more than two hundred dollars.

Section 12713. Whoever, being a manager, proprietor, operator or conductor of a place for performing dental operations, employs a person who is not a licensed dentist to perform dental operations as defined by law, or permits such person to practise dentistry in his office, or whoever practises dentistry under a false name, or assumes a title, or appends or prefixes to his name, letters which falsely represent him as having a degree from a legal dental college, or makes use of the words "dental college" or "school" or equivalent words, when not lawfully authorized to do so, or impersonates another at an examination held by the state dental board or knowingly makes a false application or a false representation in connection with such examination, shall be fined not less than one hundred dollars nor more than two hundred dollars.

Oklahoma: 1913. Section 9. Any person shall be regarded as practising dentistry who is manager, proprietor or conductor of a place for performing dental operations, or for a fee, salary or other reward paid to, or to be paid, themselves or to another person performing dental operations of any kind, treats diseases or lesions of human teeth or jaws, or attempts to correct malpositions thereof, or who uses the word "Dentist," "Dental Surgeon," the letters "D. D. S.," "L. D. S.," or any other letters or title in connection with their names which in any way represents them as being engaged in the practise of dentistry.

Section 10. It shall be unlawful for any person not licensed by the Board of Dental Examiners to conduct, maintain or operate a dental office in the State of Oklahoma, either directly or indirectly, or by his or her agents, or employees, or for such person or persons to hold themselves out to the public, either directly or through agents or employees, as soliciting business or as being qualified to practise dentistry in the State of Oklahoma.

Section 13. Any person who is manager, proprietor, operator or conductor of a place for performing dental operations, employing a person who is not a licensed dentist to do dental operations as defined in Section 9 of this Act, or permit such person without license to practise dentistry in his or her office, or whoever practises dentistry in the State of Oklahoma under a false name, or assumes a title or appends or fixes to his or her name letters which falsely represents him or her as holding a

degree from a legal and reputable college, or who impersonates others at an examination held by the Board of Dental Examiners, or who makes a false representation in connection, with any dental examination, or who practises dentistry without a license, shall be deemed guilty of a misdemeanor.

Section 22. Any person who shall practise, or attempt to practise, dentistry within the State of Oklahoma, without having complied with the provisions of this law, or shall violate any of the provisions of this Act, shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be fined not less than fifty dollars, nor more than two hundred dollars, or may be imprisoned in the County jail not less than one month or more than one year, or may be punished by both such fine and imprisonment. It shall be the duty of the prosecuting attorney of the county in which the offense was committed to prosecute every case to final judgment whenever his attention shall be called to a violation of this Act. All fines collected under the provisions of this Act shall be paid to the County Treasurer of the County in which the offense was committed, and shall be credited to the common school fund of such county; provided, however, that nothing in this Act shall be taken to prohibit legally authorized physicians and surgeons within the State of Oklahoma from extracting teeth.

Oregon: 1913. Section 4780. Penalty for Practising Without Recording Certificate; Disposition of Fines.—Any person who, as principal. agent, employer, employee, assistant, or in any manner whatever, shall practise dentistry, or who for reward or hire shall do any act of dentistry, without having filed for record and having recorded in the office of the county clerk of the county wherein he shall so practise or do such act, a certificate from said Board of Dental Examiners entitling him to so practise, shall be guilty of a misdemeanor, and upon conviction shall be fined in any sum not less than \$50 nor more than \$200 or be confined for any period not exceeding six months in the county jail, for each and every offense. All fines imposed and collected under this act shall be paid into the treasury of the county in which such suits, actions or proceedings shall have been commenced. All money thus paid into the treasury, over and above the amount necessary to reimburse the county for any expense incurred by said county, in any suit, action or proceeding brought under the provisions of this act, shall be paid before the first day of January of each year, into the State Treasury, and become and be a part of the fund to be used by the State Board of Dental Examiners in the enforcement of the provisions of this act, and shall be used for no other purpose. (Laws 1913, Chap. 353, Sec. 6.)

Section 4783. Practising Dentistry, What Constitutes.—Any person shall be considered to be practising dentistry within the meaning of this act who shall, for salary, for fee, money or compensation, paid to either himself, an employer or any other person, directly or indirectly, perform or make any operation or treatment of the human teeth, or tooth, jaws or jaw, or of any disease or lesion of the human teeth, or tooth, jaws or jaw, or the malposition thereof, or do any drilling or filling, removing tartar from, cleaning or extracting human teeth, or tooth, of any person. But nothing in this act contained shall be taken to apply to bona fide students of dentistry in pursuit of clinical advantages during the period of their dental enrolment in a dental college, and attendance upon a regular, uninterrupted course in such college, performed in such college building, nor to physicians in the regular discharge of their duties.

Section 4. Any person, company or association shall be guilty of a misdemeanor, and upon conviction thereof shall be punishable with a fine of not less than fifty dollars (\$50), or more than two hundred dollars (\$200), or by imprisonment for more than six (6) months in the county jail, or by both fine and imprisonment, who . . . 6. Shall in an affidavit, required of an applicant for examination, license or registration under this act, wilfully make a false statement in a material regard; or

7. Shall engage in the practise of dentistry under any title or name without causing to be displayed in a conspicuous manner and in a conspicuous place in his or her office the name of each and every person employed in the practise of dentistry therein, together with the word mechanic or apprentice after the name of each unlicensed person employed: or

8. Shall within ten days after demand, made by the secretary of the Board fail to furnish to said Board the name and address of all persons practising or assisting in the practise of dentistry in the office of said person, company or association, at any time within sixty days prior to said notice, together with a sworn statement showing under and by what license or authority said person, company or association and said employee are and have been practising dentistry, but said affidavit shall not be used as evidence against such person, company or association in any proceeding under this section. (Laws 1913, Chap. 353, Sec. 3.)

Section 5. Any dentist may have his license revoked or suspended by the Board of Dental Examiners for any of the following causes:

1. His conviction of a felony or misdemeanor involving moral turpitude, in which case the record of conviction or a certified copy thereof, certified by the clerk of the court, or by the judge in whose court the conviction is had, shall be conclusive evidence.

- 2. For renting or loaning to any person his or her license or diploma to be used as a license or diploma of such person.
- 3. For unprofessional conduct, or for gross ignorance, or inefficiency in his profession. Unprofessional conduct shall mean employing what are known as cappers, or steerers to obtain business; the obtaining of any fee by fraud or misrepresentation; wilfully betraying professional secrets: employing directly or indirectly any student or any suspended or unlicensed dentist to perform operations of any kind, or to treat lesions of the human teeth or jaws, or correct malimposed formations thereof; the advertisement of dental business or treatment or devices in which untruthful and misleading, improbable or impossible statements are made; or habitual intemperance or gross immorality. The proceedings under this section may be taken by the Board from the matters within its knowledge, or may be taken upon the information of another; provided, however, that if the informant is a member of the Board, the other members of said Board shall constitute the Board for the purpose of finding judgment of the accused. All accusations must be in writing, verified by some party familiar with the facts therein charged, and three copies thereof must be filed with the secretary of the Board.

Pennsylvania: 1907-1915. Section 5. It shall be the duty of every person practising dentistry within this Commonwealth to display or cause to be displayed, his or her name, posted in a conspicuous place at or near the entrance to the office or place where he or she is practising dentistry. Any person practising dentistry within this Commonwealth, within six months from the passage of this act, shall cause his or her license to be registered in the office of the Prothonotary of the court of common pleas of the county in which such person shall practise dentistry, unless the same has already been registered in said county. Any person who shall neglect to cause his or her license to be registered as herein provided shall be construed to be practising dentistry without a license: Provided, This act shall not affect the right of any person to practise dentistry, who is entitled to do so under the provisions of an act of Assembly in force, or who shall have conducted the actual, lawful practise of dentistry in this Commonwealth for five years continuously, preceding the passage of this act.

Section 6. It shall be unlawful for any person to employ any person as an operator in dental surgery, or practitioner in dentistry, for hire or reward, or to cause or permit any person to act as an operator in dental surgery or as a practitioner in dentistry, for hire or reward, who is not duly qualified and registered as a practitioner in dentistry, as provided by law. All persons shall be construed to be practising dentistry who

shall be the owner, part owner, partner, shareholder, operator, manager, assistant, or in any other manner engaged in conducting any office, or other place, for the purpose of performing dental operations, or treating, extracting, or filling human teeth, or inserting artificial appliances or sets of artificial teeth, for hire or reward: Provided, That this act shall not prohibit any licensed dentist having any person as assistant or attendant, to perform any service other than extracting, filling, treating, or operating upon human teeth, or the taking of impressions for, and the insertion of artificial appliances in, the mouth.

Section 7. Nothing in this act shall be construed to prohibit physicians or surgeons, in the regular practise of their profession, from extracting teeth for the relief of pain, or making applications for such purpose; or shall prevent bona fide students of dentistry, in the regular course of their instruction, from operating upon patients at clinics, or under the immediate supervision and in the presence of their preceptor, who is in lawful practice: Provided, That no fee, salary, or other reward for such operation shall be paid to or received by any student of dentistry, either directly or indirectly, under any circumstances. And nothing in this act shall be construed to prohibit the practise of dentistry, within this Commonwealth, by any practitioner who shall have been duly registered, in accordance with the laws of this Commonwealth existing prior to the passage of this act.

Section 8. Any person who shall practise dentistry without being duly licensed or lawfully registered, or who shall practise dentistry or induce any person to practise dentistry in violation of any of the provisions of this act, shall be guilty of a misdemeanor, and, upon conviction, shall be punished by a fine not exceeding five hundred dollars (\$500), or by imprisonment not exceeding six (6) months, or by both fine and imprisonment, at the discretion of the court.

(To be continued)





This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions, and Answers should be sent direct to him.

To Insure Proper Height in Setting Crowns.—When setting a gold crown or bridge on posterior teeth, the teeth are depressed in their sockets somewhat, as the patient bites down. When the pressure is released the tooth resumes its normal position and the crown is invariably slightly long. I compensate for this condition by using a piece of folded newspaper, four or five thicknesses on top of crown as a final procedure, after the crown has already been closed upon first.—F. L. Dungan, South Berkley, Calif.

A CLEVER RESTORATION.—As a practical hint I send the enclosed information: Patient has a peg tooth lateral and for good reasons she did not want a porcelain jacket crown. I made her an open-faced crown and cemented it on and let it firmly set. Burred out the cement on the labial surface and restored with synthetic porcelain. This made a very neat restoration, and there was no preparation of the tooth to be made.—Guy Brown, Gering, Nebraska.

An Easily-Made Matrix Band.—A band that fits and holds for use where ligatured matrices slip off and copper rings are too thick and tedious to manipulate. From a sheet of ordinary steel matrix material cut a band of sufficient width to reach from gingival of broken tooth to occlusal plane, and sufficient length to allow an overlap of one-sixteenth to one-eighth of an inch when placed about the tooth.

Adjust the band. Remove band, trim to avoid injury to the peridental membrane, and replace band in same relative position as before. Slip over the band a wire loop fastened in a broach holder. Adjust and twist the wire until the band grips the tooth. Let broach holder remain attached for use as a handle to remove and replace the matrix as desired, also to hold lips back and matrix firmly in place while the amalgam is being packed. When the amalgam sets to trimming condition, twist the wire off, straighten out the band and slip it out through an interproximal space.

The ease of making, adjusting, retaining, and removing this band are its recommendation—Joseph Evans Baldridge, Pittsburgh, Pa.

CORRECTING SOLDERED WORK AND INLAYS. - Often we have a flaw or pit in our soldered work; as for instance, an imperfect joint at cervix of Richmond crown. Make an amalgam of a few pellets of your filling gold and mercury. The mat golds are splendid. Use a clean mortar and pestle not contaminated with our regular amalgam alloys. Or it is just as efficient to make the mix in palm of hand. I always clean the palm and thumb and forefinger of the other hand with alcohol before working any amalgam. Have the piece to be repaired clean. Squeeze out surplus mercury in clean chamois. Pat down and smooth over with a burnisher or finger this amalgam where you wish to restore a part. Place work on a piece of mica or sheet of metal and heat slowly. In a few minutes all mercury is carried off leaving a yellow gold surface. Cool, dress down and polish. This method is especially handy with inlays. For any discrepancy, add a little of the gold amalgam to inlay and insert back into cavity with pressure; trim and remove carefully. Heat as before stated and a misfit becomes a "howling success." Use the amalgam quite dry and there will be very little shrinkage. Do not stand over work while heating. Have been using this method for years and there is no danger from mercury poisoning.—F. L. Dungan, South Berkley, Calif.

Editor Practical Hints:

Page 302, May DIGEST, Dr. Rudin says Iodine 10, Menthol 10, Benzol 80 parts. Dr. Crymes says Iodine 90, Benzol 10 parts, for the formula required.

What do you say?

B. N. HOPE, D.D.S.

Answer.—My impression would be that of these two preparations Dr. Crymes' formula would be the more obtundent, and Dr. Rudin's the more antiseptic; you might choose between them according to which quality you most desire.—V. C. S.

Editor Practical Hints:

I am writing to you for some information as I read the Dental Digest and consider your department one of the greatest helps, as the Practical Hints appeal to me and aid me to get results.

Please tell me where I can find or get the few practical tests that a Dentist ought to be able to do on Urinalysis, in order to give his patients

the best possible service. I mean the preliminary tests that would decide if there are serious complications.

Some Dental journal has had a similar outline, but I am unable to find it.—Algernon Payne, D.D.S.

Answer.—The information you seek may be found in Todd's "Practical Urinalysis." Personally, however, I do not believe that a dentist has any business concerning himself with urinalysis. He will have enough to do if he acquaints himself thoroughly with the various problems and processes pertaining purely to the practice of his own profession. It is much wiser every way, I should say, to refer patients for urinalysis to a physician, thus encouraging reciprocity in reference and at the same time avoiding the danger of being criticised for assumption either by your patients or by the members of either the medical or the dental profession.—V. C. S.

Editor Practical Hints:

Just another of your many readers coming to you for advice. I put in a bridge some weeks ago for a lady who speaks several languages, and recently she returned disgusted because it whistles. From appearance and otherwise it is fine. I have used Steele's facings on a cuspid to cuspid bridge, and facings are flush with the gums. She objects to the gold showing at any place and I am at a loss to know how to remedy it. Can you help me? Have heard of plates that whistled, but never a bridge. Could a saddle of some sort be made and not show any gold?—T. E. Johnson, D.D.S.

Answer.—If your patient would persevere with bridge as it is for several months she very likely would become accustomed to same and the whistling be overcome. If, however, you had used the Goslee teeth and technic, or, as I frequently do, Dentsply crowns cemented to a cast gold base, both you and your patient might have been happier to-day. In most cases I find these crowns can be ground lingually to provide for strength of cast base and still permit of porcelain contact with gum labially.—V. C. S.





Editor DENTAL DIGEST:

That there hypnotic patient spoken of in June Dental Digest by Dr. Wm. C. Dalbey of Du Quoin, Illinois, is in *love*. That's what's the matter with her, and the Doc. wants to watch out else he'll be "got." You're welcome!

RALPH D. WHEELER, D.M.D.

Editor DENTAL DIGEST:

Referring to article in June Dental Digest, "What did I do to this patient?" I would diagnose the case as purely anemia of the brain. Although the girl did not show any paleness in the face, it was simply psychic in its origin and known to be quite common in highly nervous individuals. You might call such a patient a neurasthenic. I have had several neurotic cases of that kind in my practice.

Scientific medical men are now looking up the symptoms of fear as a very important condition in the treatment of nervous diseases, and if we can eliminate fear in many minor operations it will lessen our work to a considerable extent.

If Dr. Dalbey ever encounters another patient of that kind, let him try to divert her mind from the influence which is causing the mental attitude that results in a fainting spell. This rising generation of people now growing up are more easily affected than the preceding one when I was a boy. I recently had a large, stout individual go through such a stunt in my chair before I had a chance to even look into his mouth.

Dr. F. Bush.

MORE HELP FOR THE HYPNOTIST

I have been interested in the contribution to the DIGEST headed, "What did I do to this patient?" I should say, that you hypnotized her. Whether you believe in hypnotism or not makes no difference, and I think that you demonstrated the fact that you have the power and do not know it. I can remember that years ago when I was practising I have had men in two or three instances who turned pale, and almost fainted away simply from sitting down in my chair to have an examination made, and before anything whatever was done to them. You say

this girl had always been delicate, she probably did not have much will power, and when you spoke to her reassuringly she gave up to you and did as you told her to and went to sleep. You did her no harm, but what you did put her into a state of tranquillity so that you were able to finish your operation. If she ever comes to you again you can probably treat her in the same way, and I respectfully submit that this will be a great deal better than to operate for her when she is nervous and worried, and when the fact of her being operated upon, whether she suffers pain or not. is enough to draw very heavily upon her vital force.

I am now out of practice on account of my age, but when I was in practice I know that I would occasionally have patients who would tell me that I hurt them much less than dentists had done who had previously operated upon them. You probably have noticed a difference in your own feelings towards different patients. Some would have confidence in you, and would in a way help you in what you had to do simply by having and showing confidence. Others would be suspicious of you. would be ready to jump if you accidentally hurt them a little, would be all ready to catch hold of your arm, even if they only imagined they were going to be hurt. I have had both kinds of patients. It is a pleasure to work for the first kind, and my work would not tire me, whereas the other kind who were suspicious and did not propose to be hurt if they could help it would exhaust me.

I can remember giving chloroform to one girl who wished a tooth extracted. I had previously done considerable work for her, and she had come to know me pretty well, and to have faith in what I told her. When I got my chloroform bottle I found there was but little in it, not over a thimbleful. I explained to her that I had but little of it, but if she was prepared to bear a little pain there would be enough to benumb her so that she would not suffer much, and she consented to go on with the operation. When I thought she had got all the benefit she could from the chloroform I told her so, and asked her to open her mouth, which she did, and I extracted the tooth. Then I had to tell her to use the cuspidor, which she did, and so far as I could see she was conscious, but in about half a minute more she gave a start and asked, "Why, is it out?"

I have had other cases where an anesthetic was required, and where the patient did not know me and did not propose to be hurt when an operation was impossible until anesthesia had been pushed to the limit. As soon as there was any feeling about the mouth they would come to and begin to fight.

There are all grades of hypnotism. We are all of us trying to hypnotize one another if we meet and try to impress one another favorably. I know this is a broad statement, but I believe it to be true. Any physi-

cian who calls on a patient and is breezy and jolly and reassuring in his manner, who manages in this way to brace up his patient and impart confidence, is using hypnotism, and such a physician in a case of severe illness is worth a dozen of the kind who are solemn in manner and generally pessimistic. Some years ago, while I was in Buffalo, I drew a book from the library which was written by a physician who had practised in the ordinary way, by medication, but who had gradually abandoned medication almost entirely, and was using hypnotism instead. Unless a physical examination was necessary he received his patients in a large room. He had a large chair before the window and the patients, as their turn came were seated in this chair. He wore a ring on his finger with a bright and glittering stone set in it. This he would hold rather close to the patient's face and above the eyes so that the eyes would be strained a little when the direction to look at it was followed. Then he would begin talking to them in a prosy way, saying that they would soon become drowsy; when they did he wanted them to yield to it and go to sleep. The strain upon the eyes from looking at this glittering object so near at hand had its effect, and they would soon drop off. Then he would say that the next day they would have such and such symptoms, or in case of sleeplessness he would give directions to go to bed at 9 o'clock in the evening and go to sleep. As a general thing matters would go as he said. After his directions were finished he would wake them up and tell them to call again at such a time.

The patients that he would see by preference would be those that had visited him before. The newcomers would see what was going on, and when their turn came they would be influenced by what they had seen, and the force of imitation would be called in, and they would do as they had seen the others do.

I am giving you all this from memory. I believe this physician was a German, and that the book was a translation from a German work. The last chapter in the book showed the results of his practice, both by medication and hypnotism. There were some failures in both methods, but as I remember it the hypnotism came out a little ahead, and was much less troublesome to both him and his patients.

Each of us has two mental states. One is our ordinary consciousness in which we see and hear what is going on about us, and our thoughts arise accordingly. Then there is a sub-consciousness which has a great deal to do with the processes of life, and of which we have but little knowledge. I have not studied these things in a way which enables me to discuss them, but I am very fully persuaded of the truth of what I am telling you. There are many very curious instances that I might relate which have come to me personally, and which have been told to me by others,

but this letter has already run to an unconscionable length, and I do not wish to bore you. Suffice it to say in conclusion that you have a power, in my opinion, which you might use to the advantage both of yourself and others if you would take the pains to develop it and use it wisely. I will give one more instance. Over seventy years ago there was a man came through Buffalo lecturing on "animal magnetism," as hypnotism was then called. He was sure to find one or more in the audience whom he could influence, and the latter part of the lecture was taken up in experimenting upon these subjects. My father was a dentist, and I remember on one occasion a lady was thrown into deep sleep upon the stage, and father extracted a number of teeth and roots for her without her evincing the slightest sensation of pain. She was in an anesthetic state, as complete as though she had been given chloroform, and at the same time was capable of hearing and obeying the orders which she received from this "magnetizer." I have heard of dentists who have had this power, and who could render their patients insensible to pain by a few passes of the hand over their face. Mind you, I say I have heard of them. I have not seen this thing done, but I did see my father extract these teeth for this lady, and I know that she did not seem to suffer the least pain during the operation. GEO. B. SNOW.

THINK IT OVER

There will be many answers to the question "What did I do to this patient?" as asked in the June number of the Dental Digest. To remind you of the experience may the writer quote from the article in question? "I put my left hand gently on her forehead and very lightly smoothed back the hair lying on her forehead. At the same time I said, 'Now calm yourself and go to sleep, you will not be hurt.' I waved my right hand in a playful way through the air like I had seen a hypnotist do once, laughing as I did so. She smiled and closed her eyes and in a moment I noticed her muscles relax seemingly all over her body."

Almost everyone acknowledges the possibility of using both hypnotism and mesmerism to occasion people to temporarily lose consciousness of their surroundings. Such practice, in the opinion of the writer, is utterly deplorable, for one has no right whatever to dominate, directly or indirectly, the mentality of another.

Everyone is continually using the omnipotent power of thought. We need no argument to convince us that thought is a power. Any book on either metaphysics or modern psychology will furnish an abundance of

evidence of this truth. What we do need is a clearer understanding of this power which we, in so many instances, are ignorantly using. The visible world is merely the out-picturing of thought. It is the result of the activity of the universal law of expression which may be stated in words as, "like produces like."

In the experience under consideration the power of thought was used ignorantly. That is, the operator did not realize that he was using a power, and did not understand what thoughts to think or what words to speak in order to bring his patient into a consciousness of peace and poise. Ignorance of a law does not exempt any one from its results. Although this operator saw his words accomplish a result according to their nature, still his experience was not satisfactory.

He could have accomplished his purpose, not by dominating the mentality of the patient, but by setting into operation the law of expression through thinking and speaking from the consciousness of peace, harmony and poise.

One's thoughts indicate his consciousness. If one would have only satisfactory experiences in his practice he should be diligent in keeping his thoughts upon only that which he would have actualized. Everyone should realize that actualities do not cause thoughts, but thoughts are the foundation—the substance of the actualities.

Since the writer has learned to put into practice his understanding of tne one and only power of thought it has been his privilege to experience many evidences of its truth. Any one can obtain satisfactory results, especially in such a case as that brought to our attention in the experience referred to, who will only remember and put into practice the law of thought activity—"like produces like." Constructive, harmonious, positive thinking results always for the benefit of both the patient and the operator.

ARTHUR DUDLEY HALL, D.M.D.

A QUESTION FOR OUR READERS

Editor DENTAL DIGEST:

Being a subscriber to the Dental Digest I am taking the liberty to write you in regard to several patients I have where gold crowns and bridge work will tarnish in some mouths after insertion, while others keep bright and are never brushed. Can you tell me the cause and remedy?—L. G. E.



BOTH PARTIES WERE WRONG, BUT THE RAILROAD WAS MORE SO

BY ELTON J. BUCKLEY, PHILADELPHIA, PA.

[Readers of The Dental Digest are invited to submit questions of a legal nature to Elton J. Buckley, care of The Dental Digest. This service is free.—Editor]

The question raised by the following letter will be interesting to every shipper or receiver of freight:—

Rayne, La.

Will you kindly give us your opinion upon the following case?

Some time ago we received a shipment of washing machines. One among the number was in a bad condition. This we refused to accept. The railroad company would not deliver any of the shipment unless we took it all, including the damaged machine. Since we could not get it repaired here, we refused to comply with their request. They shipped the whole lot to one of their salvage stations and salvaged them. They now wish us to accept \$12 for the whole shipment.

Can they force us to accept this settlement or can we force them to pay us the full cost of the shipment?

We would appreciate a statement of your opinion.—M. K. Co.

I am told that since they went under Federal control the railroads have been doing a lot of arbitrary things like this, relying upon the power of the Government to help them get away with it. The experience of freight shippers and receivers generally, according to my observation, is that their transportation arrangements are less satisfactory to-day than they have ever been before.

In this article I will discuss the rights and duties of the receiver of freight in such a situation as is here outlined, and the rights and duties of the railroad.

To begin with, a receiver or consignee makes a mistake when he refuses to accept goods merely because a part is damaged or missing. The law says he must accept it and then sue the railroad for his damages. He loses nothing by accepting it, anyway, even if the railroad forces him to receipt for it in good condition, for such a receipt has no weight and can easily be overturned. An acceptance of goods in bad condition is practically never a waiver of the right to claim damages from the railroad.

On this phase of the case let me quote from a leading case:

A consignee is not justified in refusing to accept the goods merely

because they are in damaged condition, but should accept them not-withstanding such condition, and then recover from the railroad such damages as have accrued to him because of the failure to deliver the goods in good order. (This is subject to one exception: if the whole consignment is ruined beyond repair, the consignee is not obliged to accept it.—E. J. B.)

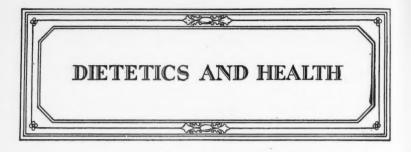
The general rule is that the consignee cannot abandon the consignment and sue for the full value, but must accept the goods as

tendered and sue for damages.

The above rule has been applied in very many cases. In a Louisiana case the court held that where the shipment consisted of a number of boxes of assorted merchandise, damage to some of the boxes didn't entitle the consignee to reject the entire lot and collect the full value from the railroad. And in a South Carolina case, where molasses was shipped and a lot of it had leaked out, the court told the consignee he must accept what was left and sue for the value of that lost.

In the case submitted, the consignee did not do as he was obliged to do. Did that warrant the railroad in refusing to deliver any of the goods and in subsequently selling them at a fraction of their value? I think not. The railroad is obliged to care for a consignee's property and cannot unnecessarily expose it to danger or to loss. My judgment is that where part of the consignment is damaged, the railroad's obligation is to deliver the undamaged part, about which of course there is no question, and then to fuss out the question of liability as to the rest with the proper party. When the railroad refuses to deliver goods belonging to the consignee, which it can and should deliver, it is not only guilty of breach of contract, but of conversion as well, and when the goods are subsequently sold for less than their value, the owner can sue for the actual value. It makes no difference whether the sale was bona fide or not, a railroad has no right to sell at all under the circumstances. There is a Maryland case in which a railroad sold a carload of hogs, after holding them only seven days, when its contract was such that it could have held them longer without The sale was made at a time when the demand was poor and the price low, and the reason for selling was that the connecting railroad, i. e., the road to which the above road was to deliver them, refused to receive them because of a temporary Federal quarantine. The court said the first road had no right to sell in that way, and must pay the full value of the hogs.

So that the consignee is supposed to accept the goods no matter what their condition, provided they aren't ruined, and to sue for whatever damages can be proven, but if he doesn't, the railroad cannot legally refuse to deliver the undamaged part and subsequently sell it for a fraction of its value.



HOW A BUSINESS MAN KEEPS FIT

Two prominent business men,—one of Boston and the other of New York,—are great rivals at the game of pool. They also are much interested in keeping efficient. One has just written to the other, describing by request what he had learned about diet, and the best way of keeping fit. The writer is a traveling man, past fifty, notably vigorous and efficient. His outline regarding food is as follows:

In the first place, I am convinced that in order for the bowels to function properly, they must be kept moderately full.

It appears that when they are empty, or nearly so, they lose the vigor of the peristaltic action, as will be noted in fasting, where enemas are indicated, to clear the colon. Now, you and I, or people over fifty years of age, cannot eat the amounts of ordinary foods that we did as boys; therefore, in order to keep them full, we must eat foods with plenty of cellular waste, but of low proteid content.

We hear a great deal about vitamines and the salts. Well, these seem to be vitally necessary in the proper functioning of the bowels, as well as the entire body.

I make it a point to eat some green vegetables every day, such as lettuce and celery, also turnip, squash, spinach and very little potato.

These furnish bulk, waste, the salts, and vitamines, and are easily digested. Also we must not forget oil. Our bodies need a lubricant as surely as a sewing-machine.

Finally, fruits, such as apples, prunes, figs, oranges, grapes, peaches, and all but the sour fruits. For sweets, I use honey, dates, figs and sweet apples.

Now, with that dietary, I have cured constipation of thirty years' duration.

When I go away visiting, and get out of my regular diet, I take a teaspoonful of petroleum oil morning and night. It is not assimilated, and does not create a habit or need in the body; but I have not had to use it for two years.

I eat breakfast of bran muffins and honey, with black coffee (latter should be diluted); lunch, head lettuce, oil sauce, bran-bread sandwich; dinner, usually meat or fish and two vegetables. Then at night I eat an apple or two, or an orange. Of course I vary this daily, but one thing I aim to do, and that is to get plenty of lettuce or celery every day, also olive oil.

This suits me fine. I don't wonder that Fletcher is dead. He ate too little in bulk.

Trouble with all these faddists is that they get one idea in their heads, and ride it to death. Nature intended us to be normal, and it is not normal for a man with a six-pint stomach to fill it one-tenth full with fifteen "bites" a meal.

I forget all about my stomach now, and eat more than I formerly did, but I fill up in vegetables, which satisfy in bulk and are thoroughly digested, as they do not ferment, and that is the sin of improper digestion. Of course when you add a lot of other things to this dietary, you mix a lot of foods that are incompatible, and you have all kinds of complications.

We must have few foods at a meal, not over three, excépting that it appears in my own case, that meat and four vegetables get along as amicably as meat and one vegetable. In other words, the vegetables, outside of potatoes, seem to agree. As to your fruit breakfast, I find that fruit agrees with me best when eaten on an empty stomach. Apple baked, toast and coffee don't agree with me.

I often eat two baked apples without cream, and black coffee, for breakfast, with good results, but when I add toast, a fermentation shows that all is not harmonious.

At camp, last summer, I often ate dead-ripe bananas, bran-bread and a bowl of milk. These seemed to agree all right.

Often I ate cottage cheese with cream and bran-bread, and that was about the best of all.

The only trouble with eggs, milk and white bread is the lack of waste. I read long ago the book, "The Prolongation of Life," recommending the sour milk diet. Like many other things, it has plenty of good points, but it did not keep Metchnikoff alive long after he brought out his book, and I do not believe in it, excepting occasionally a milk, or sourced milk, diet affords the system a rest, and sets up a general house-cleaning. In that regard, it is undoubtedly a good thing.

When I went down to Eureka Springs, and lived on soured milk for two weeks, I have always thought that that was the cause of clearing up whatever trouble I was experiencing in my colon. Certainly, either that or the monodiet the rest of the time, did the trick.

I should say, however, that such a diet was remedial rather than

usual, or to be used only when necessary. I cannot believe that Nature intended us to live habitually on soured rather than on sweet milk.

I would, however, like to be able to get it, and during the spring and summer live on that exclusively one day of each week. It is wonderfully cleansing and appears to lessen blood pressure.—W. H. B. in *Healthy Home*.

INFLAMMATION EXPLAINED

It must be clearly understood that inflammation is a reaction of the tissues, and as such is a wholly beneficent thing. In olden days physicians had great ideas about "reducing inflammation," not recognizing that inflammation is the friend of the patient. The area of inflammation is the battlefield between the invading germs and the defensive mechanisms of the body. The redness is due, as explained in the Commonwealth Dental Review, to the dilatation of the blood-vessels in order that a larger supply of blood may be carried to the scene of action; the swelling is due to an outpouring of serum and leucocytes, the two great anti-bacterial agents. These leucocytes swarm to meet the invader, and literally try to block his path with their bodies; and the pus which flows from a seriously infected wound represents the bodies of innumerable leucocytes, mostly slain in the conflict, but some still living. The pain is due to nerve endings which inhabit the war zone, and share the usual fate which non-combatants meet with under these circumstances. The recovery from infection is always due to the tissue resistance alone—the surgeon may do something to aid it, but recovery has very often ensued in spite of. and not on account of, his interference. When once germs have penetrated the tissues we have no means of getting rid of them, except, perhaps, by cutting out the infected tissue. Similarly, the general symptoms which are the consequence of bacterial infection are probably likewise of a protective nature. Such, for instance, is the rise of bodily temperature. Some years ago physicians took much pains in attacking the temperature and trying to "get it down"; now it is practically certain that the rise of temperature is in some way connected with the mechanism of resistance to disease. Pneumonia is a disease usually accompanied by a high temperature; if this rise of temperature does not occur the patient practically always dies. The medical profession has on many occasions vigorously attacked, not the cause of the disease, but the very means which nature was using to protect the patient. I think it was Voltaire who said that "the function of the physician was to amuse the patient while nature cured him," but the physician often has gone one better, and put a spoke in nature's wheel.

AGRICULTURE OR HUMAN CULTURE-WHICH?

[Is it not about time that YOU showed some interest in this matter?—EDITOR]

The war, though it has profoundly affected the health not only of Europe, but also of America, is by no means responsible for the wholesale slaughter of children among civilized nations. Long before war broke out groups of alarmed individuals here and there were checking up the causes of the prevailing diseases encountered everywhere among children on the streets, in the home, at school, and—let there be shame in the reference—among children in factories where child labor is employed.

The fact that nearly 500,000 children under ten years of age die in their American homes every year should in itself prove sufficient stimulus to arouse us to an adequate comprehension of the significance of this tragedy.

But—the childhood morbidity and mortality officially reported in America this year merely represent a continuation of the savage superstitions that have gone on unheeded among civilized nations for years—superstitions that neither flow out of war nor are in any other way related to war.

Several years before Germany invaded Belgium half the children in a school in Leeds were found by Dr. Hull to be suffering from malnutrition due to the consumption of highly refined, processed and commercialized foods.

England in large measure has to depend for her foodstuffs upon other nations. England is an industrial not an agricultural country. England imports foodstuffs from America that kill just as many children in England as they kill here.

One might accomplish more, according to the ultra-conservative school, by putting the soft pedal on such statements than by driving at them with a battering ram. The soft pedal has been on for years. The slaughter not only continues but increases. Let us, therefore, give the battering ram a chance or rather, through the battering ram, let us give the child a chance.

Of 10,500 school children examined, the British Dental Association found 86 per cent. suffering from defective teeth. Defective teeth are the more or less hideous tombstones erected to the doubtful honor of foods lacking in the mineral salts from which sound bones and good teeth as well as healthy tissues, depend.

Insufficient food of the right kind or too much food of the wrong kind always grows a harvest for man to reap in the form of physical defects. Away back in 1911 the division of child hygiene of the Boston Board of Health, under the direction of Dr. William J. Gallivan, examined 42,750

children in the schools. When they culled them all out 27,795 were classified as "defective."

In 1919 our agriculturists manifested great alarm lest the European corn borer should spread from the limited area where it was discovered in New York State and infect other regions where corn is grown. The machinery of government was at once set in motion to check the ravages of the European corn borer. Wise indeed is the state that permits itself to be agitated in the presence of the European corn borer. But what about the food deviltries that have been boring unmolested into the health and life of the child?

When we find in Boston alone, in a single examination among school children, 19,518 cases of defective teeth, 9,738 cases of diseased tonsils, 3,509 cases of skin diseases, 575 cases of rickets, and 1,611 cases of malnutrition, it seems opportune to contrast such human ravages and all they signify with the ravages of the European corn borer, not as those ravages have been recorded, but as it is feared they may be recorded, unless we do something to save the corn.

In one little group of 1,694 children examined in New York City in six clinics by Dr. A. Freedman Foot only eleven fortunate kiddies were found to possess normal teeth. Surely something quite as vicious as the European corn borer had been at work on those teeth.

We are going to trace the cause of all this in unsparing detail, and outline the remedy, not as it is suggested in theory but as the government itself in more than one unguarded utterance has specifically and definitely prescribed.

What did Dr. Foot report to the Second District Dental Society of New York after his examination of the 1,694 children among whom but eleven possessed normal teeth?

His words ought not to be allowed to die until they have been acted upon. This is what he said:

"The six-year molars of nearly every child were broken down wholly or in part. In many instances the molars were decayed through the gums. So extensive and far advanced were the defects that corrective treatment, even if it were applied, would have been of little value."

If any such diseases were reported with respect to this year's crop of American wheat, corn or oats, not only America but the whole world would go into a panic, and yet we accept the picture of broken childhood, carefully frame it, and hang it up in a gallery that nobody ever visits.

—Alfred W. McCann in New York Globe.



THE TREE

I think that I shall never see A poem lovely as a tree.

A tree whose hungry mouth is prest Against the world's sweet flowing breast.

A tree that looks at God all day And lifts her leafy arms to pray;

A tree that may in summer wear A nest of robins in her hair;

Upon whose bosom snow has lain; Who intimately lives with rain.

Poems are made by fools like me But only God can make a tree.

-JOYCE KILMER.

EXTRACTIONS



Without vision, business perishes.

No wise woman trusts a man who trusts to luck.

Don't put in too much time standing on dignity or riding a hobby.

There's a good thing about a dog: he does not pretend to be anything else.

Some folks are like clocks. They are going all the time, but never get anywhere.

The statesman tries to lead the people into virtue. The politician capitalizes their failings.

Why is it that one never sees the portrait of an angel in trousers or the devil in petticoats?

Bacon said reading maketh the full man. Comes then the funny chap who asks, "full of what?"

(Bell) She said her face was her fortune. (Stell) Well, her wealth sure increased while she had the mumps.

(Maid) There's a mendicant at the door, madam. (Mrs. Newrich) Well, tell him we haven't anything to mend to-day.

While the Administration is taking in washing for all humanity, it might not be a bad idea to shy a few cakes of soap toward Mexico.

Scotsman to dentist: "Ten-an'-six wi' gas, an' only half-a-croon wi'oot? Weel, I'll just come again to-morrow an' hae it oot by daylight!"

Automobilists are warned in this way in a certain garage: Don't smoke in this garage.

If your life isn't worth anything, gasoline is.

Be good, my dear, and let who will be clever; Do noble things, not dream them all day long; And so make life, death and the vast Forever One great sweet song. A use has been found for the celluloid wands with which the barkeeps scraped the foam from beer. Mr. Squirrelfood thinks they will make splendid combs for baldheads.

Mother (angrily) Johnny, how many times have I told you to stop that noise?
Johnny (after a pause) Seven times, mamma. What do you want to know for?

She had been married twenty years, Rang the glad silvern chimes; But Oh! that printer—hence her tears— He made it "twenty times."

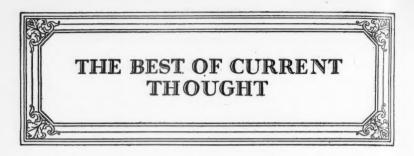
A man sung at his own funeral lately,—that is, talking-machine records of his voice were put on a machine and while the man lay in his coffin his own voice sang "Rock of Ages" and "I'm a Pil-grim."

If a person could travel as much as his blood does he would be a wonderful tourist. If you live to be eighty your heart will have propelled your blood a distance of 5,000,000 miles, equal to 200 round trips along the equator.

A cynic is a far worse specimen of humanity than a pessimist as a general rule. A pessimist will complain mostly in an observational way, seldom attempting to pull things up by the roots. His most consistent feature is that of being always the reverse side of the optimist, as the following lines may show:

'Twixt optimist and pessimist
The difference is droll;
The optimist the doughnut sees,
The pessimist the hole!

The cynic, however, is morose and vulgar; he scrons all customs and opinions; he snarls and grumbles and sees everything in a perverted way. It was a cynic who described a Beethoven string-quartette as "only the scraping of horses' tails on cats' bowels." We think of such persons lightly by saying that it takes all sorts of people to make a world. But don't be a cynic!



[Dental Cosmos, July, 1919]

Contents

Original Communications

Report of Five Years of Mouth Hygiene in the Public Schools of Bridgeport, Conn. By Alfred C. Fones, D.D.S.

Relation of Dental Affections to Systemic Diseases. By Alfred Stengel, M.D.

The Present Status of Teeth Without Vital Pulps. By L. Ashley Faught, D.D.S.

Concerning Gold Inlays. By H. E. Tompkins, D.D.S.

Report of Committee on Dental Science and Literature. By L. Pierce Anthony, D.D.S.

Diseases of the Dental Pulp. IV. Treatment. By Hermann Prinz, M.D., D.D.S.

Pseudo-Hemophilia. By Dr. L. R. Gans.

Root Amputation. By Joseph Levy, D.D.S.

Correspondence

A Notable Concession to Dentistry in Japan.

"Checking of Gum Blocks."

Dental Care in Pregnancy.

Failure in Apicoectomy.

"Dental Broach in the Bronchus." .

Proceedings of Societies

Pennsylvania Association of Dental Surgeons.

"Forsyth Day" at the Forsyth Dental Infirmary.

Editoria! Department

The Bridgeport Demonstration.

Bibliographical.

Practical Hints.

Review of Current Dental Literature.

Periscope.

Army and Navy Dental News and Notes

Army and Navy Dental News.

Preparedness League of American Dentists.

[Dental Summary, July, 1919]

Contents

Regular Contributions

Oral Foci of Infection from a Dentist's Standpoint. By H. H. Schuhmann.

Ulcerative Gingivitis Due to Vincent's Organisms. By Edward B. Lodge.

New Root Filling. By W. Clyde Davis.

Technic for the Removal of Dead Teeth. By Josef Novitzky.

A Plea for Closer Relationship Between the Dentist and the Physician. By Charles W. McGavran.

Simpler Methods in Correct Artificial Denture Making. By W. C. Dalbey.

Pyorrhea. By Stephen H. Voyles.

How Anesthetics Produce Anesthesia. By W. E. Burge.

Geminated Teeth. By H. L. Ambler.

Cotton Process Ethylene-Ether Analgesia. By James H. Cotton.

Analgesia and Short Anesthesia in Daily Practice. By Will Walter.

An Interesting Exhibit. By J. H. Bristor.

Partial Lower Compound Impressions with the Mouth Closed. By Samuel G. Supplee.

Backing for Steel Facings. By T. A. Haas.

The "Y" Girl.

Ode to Little Willie. By Alphonso Irwin.

[Den:al Items of Interest, July, 1919]

Contents

Exclusive Contributions

Report of Five Years of Mouth Hygiene in the Public Schools of Pridgeport, Conn. By Alfred C. Fones, D.D.S.

Report of the Oral Hygiene Committee of the Second District Dental Society of New York for the Season of 1918-19.

Orthodontia

Teaching Our Patients to Overcome Undesirable Muscular Habits. By Alfred Paul Rogers, D.D.S.

Exodontia

Information on Impacted Teeth. By Dr. A. Berger.

Society Papers

The Control of Dental Caries. By Russell W. Bunting, D.D.S.

Society Discussions

Second District Dental Society.

Editorial

The Value of Oral Hygiene in Public Schools.

Around the Table

Preparedness League of American Dentists-A Report of French-Belgium Relief Work.



The Fiftieth Annual Session of the Virginia State Dental Association will be held in Richmond, Virginia, August 25th to 30th, 1919. A Post Graduate Course of lectures on Crown and Bridge Work, Conductive Anesthesia and Dental Roentgenology is being prepared under auspices of the Association. For particulars, programme of work, etc., address

Dr. W. H. Street, Cor. Sec'y. Richmond, Virginia.

The New England Dental Society, formerly the Northeastern Dental Assocation, will hold its Twenty-fifth Annual Meeting in Boston, Mass., on September 3d, 4th, 5th, 1919, at the Sommersett Hotel.

ALVIN A. HUNT, Sec'y.

The Fifty-second Annual Meeting of the Tennessee State Dental Association will be held at the Hotel Hermitage, Nashville, Sept. 4-5-6, 1910.

From all appearances our programme promises the greatest meeting ever.

JAMES J. VAUGHN, Chairman Pub. Com.

The Thirty-second Annual Meeting of The Northern Illinois Dental Society will be held at Rockford, Wednesday and Thursday, October 8th and 9th. A cordial invitation is extended to practitioners of Dentistry.

R. P. CULVER, Sec., Dekalb, Illinois.

A special conference of dentists operating in school dental dispensaries and of persons interested in such is to be held in New Crleans at the time of the National Dental Assocation Meeting, October 20-24, 1919.

At a similar meeting held June 13th at Syracuse during the New York State Dental Society meeting, so much interest was shown that a Committee was named and instructed to call this National conference.

All persons interested are requested to extend their suggestions or questions to the Committee.

DR. WILLIAM H. LEAK, Chairman,
Oral Hygiene Inspector
New York State Dept. of Education.
DR. S. R. MEAKER, Auburn, N. Y.
DR. ERWIN SCHEID, Dental Director,
Chazy Central Rural School, Chazy, N. Y.

The Association of Military Dental Surgeons of the United States will hold its annual meeting at New Orleans, October 20 to 24, 1919.

R. W. WADDELL, Secy-Treasurer.

An invitation is extended to every member of the National Dental Association to attend the Twenty-third Annual Session of the Association, October 20, 21, 22, 23, 24, 1919, in New Orleans, La.

Jos. P. WAHL, Chairman Local Committee.

C. V. VIGNES, President.

NATIONAL DENTAL ASSOCIATION MEETING

INFORMATION CONCERNING NEW ORLEANS AND ITS HOTEL
ACCOMMODATIONS

New Orleans always has been light-hearted and gay, and even in this cycle of industry when all the world is scrambling to forge ahead, the Crescent City still has a moment in which to entertain the strangers within her gates. To the delegates attending the National Dental Convention, New Orleans renews her pledge to make their visit long to be remembered. During the time business slacks, the visitors are assured a pleasurable time.

Never too hot, never too cold, is a good way to describe the climate of New Orleans. Surrounded on three sides by water, the City enjoys a mild, moist brand of weather. In October the temperature lurks between a light chill and an Indian summer warmth, and records show this month has a high average in the sunshine column. July is normally the warmest month and the average yearly mean temperature for 46 years is 55.6 degrees. Only seven days in forty-three years have seen the mercury rise over 100, a record hard to touch.

d

The Metropolis of the South is primarily a city of fashionable clubs, fraternities and homes. The clubs include the Boston, the Pickwick, the Chess, Checkers and Whist, Southern Yacht Club, Country Club, Round Table Club, Audubon Golf Club, and the Louisiana Club. All of these have homes which will be thrown open to the visitors. The Elks have the finest club house in all Elkdom and it will be open to the visitors. The Shriners have just built a magnificent mosque, and the Masons have a building in keeping with their national standard. The Knights of Columbus also occupy a prominent place among the lodges.

A trip along the river front will prove most enjoyable and it is almost certain the Entertainment Committee will arrange something of this nature, there being several sight-seeing steamers docked here at all times. New Orleans has the greatest inner harbor in the world with 41 miles of frontage at which eighty ocean-going ships may berth at once. This includes the Inner Harbor Navigation Canal, linking the river and Lake Pontchartrain with a lock-level channel thirty feet deep, six miles long, and which connects all railroads and steamship lines. Port facilities valued at \$13,551,206 include steel sheds and docks covering nearly eight miles with 4,478,000 feet of covered floor space.

New Orleans has seven Class "A" Hotels, which include the St. Charles, Grunewald, Monteleone, Lafayette, De Soto, Cosmopolitan and the Planters. The following hotel rates will prevail:

GRUNEWALD HOTEL, University Place, off Car					500 rooms
Single room, without bath, for one person					\$1.50 per day—
for two					2.50 and up
Single room, with bath, for one person .					3.00 per day-
for two					4.00 and up.
Double room, without bath, for one person					2.00 per day—
for two					3.00 and up
Double room, with bath, for one person .					4.00 per day—
· for two		•	*		5.00 and up
ST. CHARLES HOTEL, St. Charles and Common	St	ree	ts		500 rooms
Rooms occupied by one person, without bath	h				\$2.00 to \$3.50
Rooms occupied by one person, with bath					3.00 to 7.00
Rooms occupied by two persons, without ba					4.00 to 6.00
Rooms occupied by two persons, with bath					5.00 to 10.00
Parlor, bedroom and bath					10.00 to 25.00
HOTEL MONTELEONE, Royal and Iberville Stre	pts				400 T00ms
Single room, without bath, for one person	-			•	\$1.50 per day and up
Single room, with bath, for one person .	•			•	2.50 per day and up
Double room, without bath, for two persons					2.50 per day and up
Double room, with bath, for two persons .					3.50 per day and up
HOTEL DE SOTO, Baronne and Perdido Streets					zeo rooms
		•	*	•	\$1.50 per day and up
Single rooms, without bath				•	2.50 per day and up
Double rooms, without bath				٠	2.50 per day and up
Single rooms, with bath				•	3.50 per day and up
Double rooms, with bath	•		•	•	3.50 per day and up
COSMOPOLITAN HOTEL, 120 Bourbon Street					100 rooms
Single rooms, without bath, for one person					
Single rooms, with bath, for one person .					2.co per day and up
Double rooms, without bath, for two persons	š				2.co per day and up
Double rooms, with bath, for two persons					3.co per day and up
LAFAYETTE HOTEL, St. Charles and Lafayette	Str	eet	S		80 rocms
Single room, without bath, for one person					\$1.50 per day and up
Single room, without bath, for two persons					2.50 per day and up
Single room, with bath, for one person .	•	•	•	•	2.co per day and up
Single room, with bath, for two persons .					3.co per day and up
Double room, with bath (twin beds)					5.co per day and up
PLANTERS HOTEL, Dauphine and Iberville Stre	ofc				ne monte
Single room, without bath, for one person					\$1.00 per day and up
					2.00 per day and up
Single room, with bath, for one person. Double room, without bath, for two persons					
Double room, with both, for two persons	•			•	2.00 per day and up
Double room, with bath, for two persons .					3.50 per day and up

A WRITER WANTED

Every once in a while some dentist or society writes for the name of a dentist who can prepare one or more articles of a professional type, suitable for the education of the public through the local papers. Just now a dental society wants such service and will pay for it.

Dentists who feel themselves qualified for this sort of work and wish to undertake it are invited to send me their names and any evidence of their ability to do the work.

GEORGE WOOD CLAPP.